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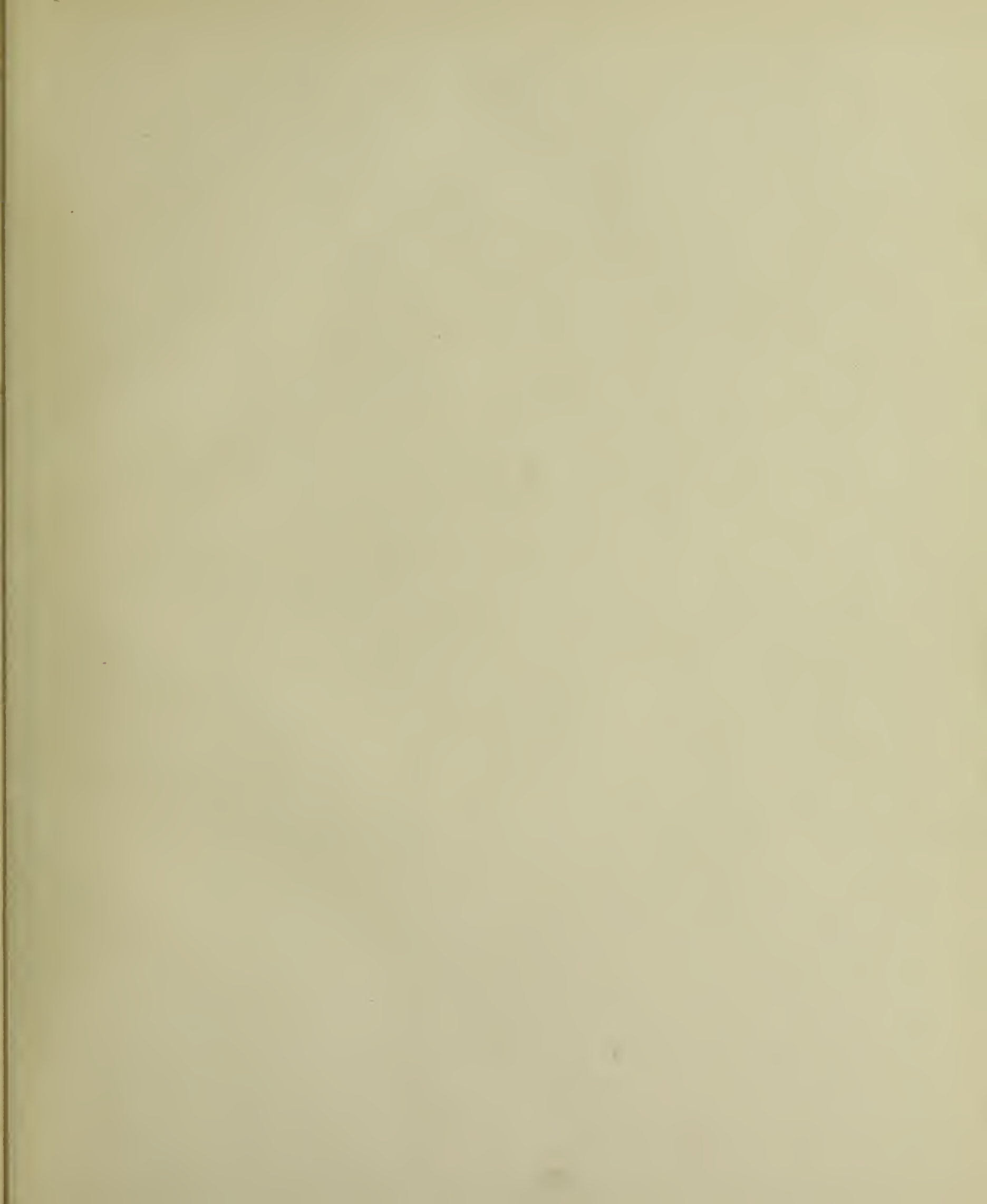
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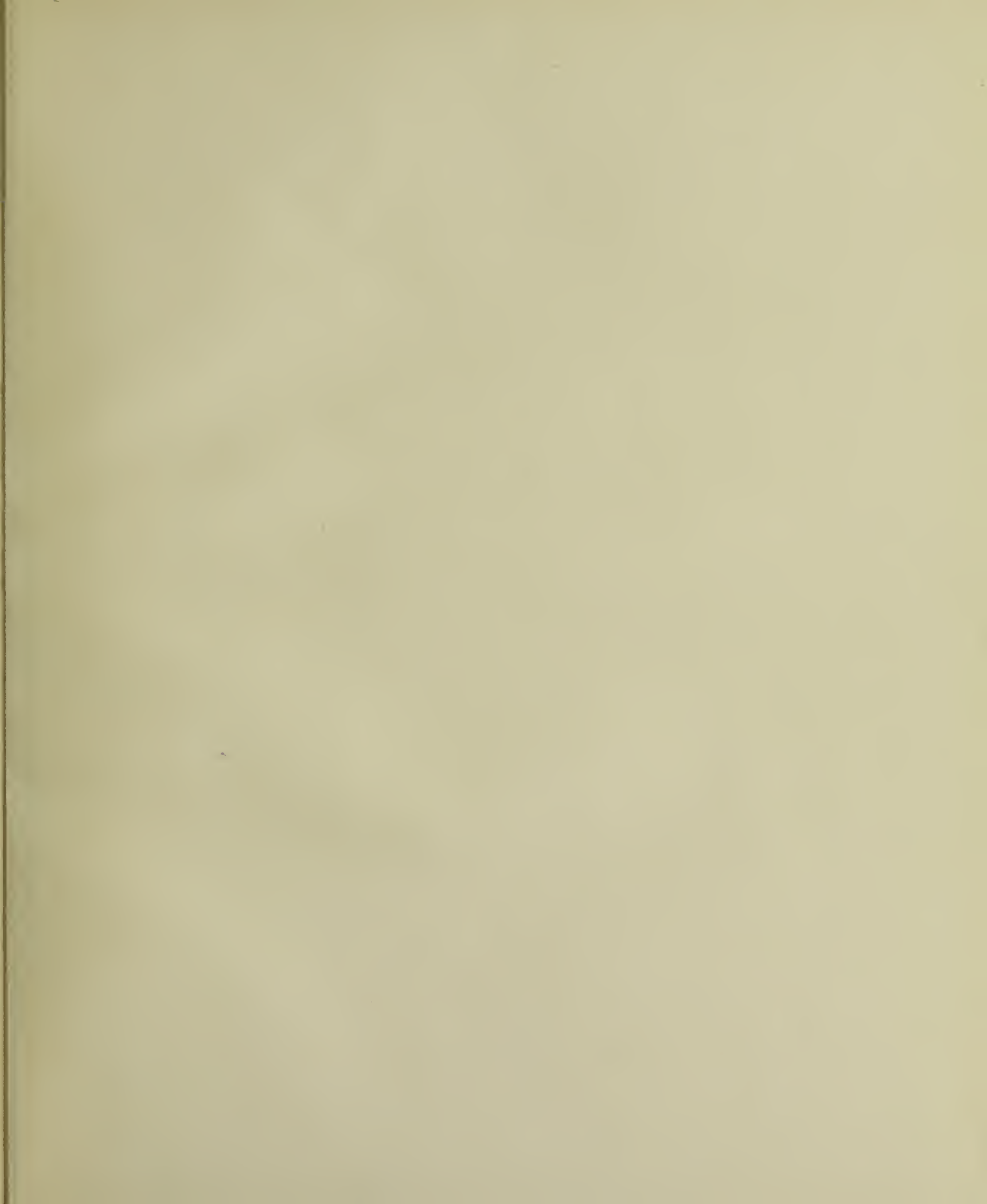
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BRITISH BIRDS

VOL. III

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Great Bustard. (♂ & ♀)

BRITISH BIRDS

WRITTEN AND ILLUSTRATED BY
A. THORBURN, F.Z.S.

WITH EIGHTY PLATES IN COLOUR, SHOWING OVER
FOUR HUNDRED SPECIES

IN FOUR VOLUMES
VOL. III

LONGMANS, GREEN AND CO.

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1916

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BRITISH BIRDS

Order HERODIONES.

FAMILY ARDEIDÆ.

THE SQUACCO HERON.

Ardea ralloides, Scopoli.

PLATE 41.

Over sixty examples of this species have been recorded in the British Islands, the greater number of these having occurred in the southern and south-western parts of England, including the Scilly Islands. It has only been noted thrice in Scotland, and eight times in Ireland. During summer it visits the countries bordering the Mediterranean, as well as southern Russia, eastwards to the Caspian Sea, but is only occasionally seen in Central Europe, whilst it appears to be a resident in Africa.

This beautiful little Heron is usually found breeding in colonies, often in company with Night-Herons and Egrets, the nest being rather slightly constructed of twigs and placed on the boughs of trees or in bushes in marshy places or where floods have inundated the ground. In North Africa, it is said to nest on the ground among reed-jungles. The greenish-blue eggs vary in number from four to six. A large proportion of the food of this species consists of aquatic insects, but frogs, tiny fishes, and even small mammals are also eaten. A captive bird with which I was well acquainted passed a good deal of its time during rainy weather in stalking blue-bottle flies, which it approached in a crouching attitude with great caution, and when within striking distance, with a sudden dart of its bill, seldom failed to secure its victim.

The late Colonel Irby says (*The Ornithology of the Straits of Gibraltar*, 2nd ed., pp. 204-205): "On the Spanish side the Squacco Heron is entirely migratory, arriving during the month of April. They are common in the marisma of the Guadalquivir; but I never observed any near Gibraltar, nor did I ever see them following cattle, like the preceding species (Buff-backed Heron). They nest late in the season."

BRITISH BIRDS

This bird is generally quiet and silent, spending a good part of its time with its neck drawn closely in after the style of a Bittern. The late Lord Lilford states that the only note he ever heard from this species was "a harsh rattling croak."

The female resembles the male, but the plumes on the back of the neck are not quite so long.

According to the late H. E. Dresser (*Birds of Europe*), "the fully adult dress is not assumed until the third year."



Green Heron
Common Blue Heron

Black Noddy
Brown Noddy
Great Green Heron

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THE NIGHT-HERON.

Nycticorax griseus (Linnæus).

PLATE 41.

The Night-Heron has been known as a straggler to England since 1782, when it was first recorded, and since that date a good many have been obtained, mostly on the southern and eastern coasts, although a fair number have occurred inland. A few have been noticed in different parts of Scotland, one as far north as Aberdeen, and another on the Outer Hebrides, whilst in Ireland twenty-four have been observed.

It is known as a regular spring visitor to Central and Southern Europe, and has been recorded as far north as the Faeroes, inhabiting also more or less the whole of Africa and a large part of the temperate and southern regions of Asia. A closely allied form is found in America.

Regarding its nidification, Lord Lilford says (*Birds of Northamptonshire and Neighbourhood*, vol. ii. p. 125): "This species commences to nest about the middle of May, sometimes in congregations composed entirely of its own species, but, in my experience, most frequently in company with other members of the Heron family. The nests are slightly but solidly built of twigs and reed-stalks, and usually situated in low-growing bushes in marshy jungles, but occasionally in trees at a considerable height, and now and then among canes and reeds only a few inches above the ground or water. The eggs are generally four in number, and in colour are of the usual greenish-blue that prevails among the Herons."

The bird represented in the plate was drawn from a sketch of one in the Lilford aviaries, as it stood over its eggs, which were laid on the bare ground, two small twigs being the only material collected for the nest.

The rather melancholy "squak" which represents the Night-Heron's usual note is mostly heard after sunset, as the habits of the bird are entirely nocturnal; during the day it generally seeks the repose of shady willows and other trees, where it passes the time, sitting quietly on some bough.

The food consists of various aquatic insects, reptiles, and small fishes, in the capture of which the bird shows great activity.

The long white neck-plumes of the Night-Heron vary considerably in number; according to Lord Lilford there are usually five, while some birds have only two, and as many as ten have been noted. These are shorter in the female, and her colour is also duller.

The immature bird has the upper parts brown with lighter stripes and spots, and the pale underparts are streaked with dark.

THE LITTLE BITTERN

Ardetta minuta (Linnæus).

PLATE 41.

Although only an occasional visitor to the British Islands, there is good ground for believing that this small species has nested in Norfolk as well as in other parts of England. It is rarer in Scotland, but some thirty occurrences have been noted in Ireland.

The Little Bittern is common during the summer months among the marshes of Central and Southern Europe and in North Africa, where it is also found in winter, whilst eastwards it ranges as far as North-west India.

The nest, built of twigs, dead reeds, and sedge, is usually placed just above the water, in dense reed-jungles or in tamarisks. The eggs, generally six in number, are dull white in colour, sometimes tinged with pale greenish.

Like the Common Bittern and Night-Heron, this species feeds at night, and lives on frogs, small fishes, worms, aquatic insects and their larvæ.

It passes the day lurking among the dense tangled growth of the marshes, and if suspicious of danger, is an adept at threading its way through the thick cover of its surroundings.

Lord Lilford states that "the only note I ever heard uttered by this species is, to my ear, best rendered by 'woogh,' 'woogh'—a sort of deep guttural cough."

The female differs from the male in being rather smaller, also in having the head brownish-black in colour, the cheeks and neck reddish-buff, and the back and scapulars dark chestnut with narrow margins of buff, while the underparts are buff streaked with brown.

THE COMMON BITTERN.

Botaurus stellaris (Linnæus).

PLATE 41.

The Bittern, whose name is familiar to most people, though but few have seen it at large or listened to its weird love-song, has occurred in most of the English counties, the dense reed-beds and sedgy bogs of East Anglia having been its chief stronghold in former times. Now it is principally known as a not uncommon winter visitor, and in recent years, where it has obtained sufficient protection from the egg-collector, is known to have reared its young, at least in one instance, in Norfolk as late as 1911.

The Bittern was plentiful as a resident in the fen districts until the first quarter of last century or even later, its disappearance as a breeding species having been hastened by the extensive draining of the marshes where it nested. It has been recorded in many parts of Scotland, mostly as an irregular visitor, and during winter it occurs in Ireland, more especially in the southern portions. Its range is wide over Europe, Asia, and North Africa.

The nest is placed among the cover of reed-jungles, and consists of a mass of the dead stems of water-plants. It contains four eggs, of a dull brownish-olive, without markings, laid early in the year, often in March. When sitting on her eggs, a captive Bittern which I had opportunities of watching, on being approached usually puffed out her feathers, appearing a much larger bird than she really was, as depicted in the plate.

The food consists of fishes, reptiles, and any small mammals up to the size of a Water-rat that can be reached with a quick lunge of its pointed bill, or even birds as large as a Water-Rail.

Mr. E. W. Wade, writing in *British Birds* (vol. i. p. 330), says: "The peculiar note from which the Dutch name (Roerdomp) is derived, is uttered as the bird sits in some reed-bed over the water. It resembles the bellowing of a bull, but with a deeper resonance. When heard at close quarters the bird seems to catch its breath three times, as if inhaling air, and then booms three or four times, the first boom sounding half-choked, the others clear and loud, after which it is silent for twenty minutes or half-an-hour. On wet days the note is oftener heard than on fine."

BRITISH BIRDS

Living amidst the thick cover of lonely swamps the Bittern leads its solitary life, hiding among the reeds during the day, where it may easily be overlooked owing to the colour of its plumage harmonising so closely with its surroundings. Loth to leave its retreat by taking wing, if approached in its hiding-place the bird will immediately straighten itself out in an upright position, with its bill pointing to the sky, always facing the intruder, but moving so gradually that the motion is hardly perceptible. I have often watched a captive bird carry out this manœuvre, and was struck with the close resemblance the striped and barred feathering on the neck bore to withered reed-stems.

As evening deepens the Bittern becomes active, and may be seen passing from one reed-clump to another on noiseless wings.

The strange aloofness of this bird's character combined with its nocturnal habits, of which little appears to be known, have lent an interest to the Bittern which makes its very name attractive to the bird lover, and it is to be hoped that the attempts it has lately made to re-occupy some of its old haunts during the breeding season will lead to its increase.

The female resembles the male in colour, but is said by Montagu and others to be smaller.

THE AMERICAN BITTERN.

Botaurus lentiginosus, Montagu.

PLATE 41.

This New-World species has been recorded about forty times in the British Islands, the first having been killed in Dorsetshire in 1804. Curiously enough, it has apparently never occurred on the Continent of Europe, although it has visited Greenland. The home of this species is in America, its range extending over the greater part of that country. The late Howard Saunders states (*Manual of British Birds*, 2nd ed.), "When situated on dry ground the nest is a very slight structure of reeds and grass; but in places liable to inundations it is sometimes considerably elevated."

In colour the eggs closely resemble those of the Common Bittern, and, according to Seebohm, are from three to five in number.

The food consists chiefly of frogs and other reptiles, as well as fishes and small mammals.

The love-note differs from that of our bird, the sound having been compared to that caused by a mallet when driving home a stake in swampy ground.

In general, its habits and appearance resemble those of the Common Bittern, but it is rather less in size, the crown of the head is brown instead of black, the vermiculations are finer, and the quill feathers of the wing are a uniform slaty-brown without bars. According to Millais, its flight is also more rapid and it rises very swiftly.

FAMILY CICONIIDÆ.

THE WHITE STORK.

Ciconia alba, Bechstein.

PLATE 42.

The White Stork is an occasional straggler from the Continent of Europe to the British Islands, the greater number of the records coming from East Anglia, where some thirty have been noted, whilst its visits to Scotland and Ireland are few and far between, and although known for some centuries as a wanderer to our shores, it has never at any time nested here.

A summer visitant to many parts of the Continent of Europe, and ranging as far north as Norway and southwards to Spain, the White Stork also inhabits Asia and Africa, and winters in Central and South Africa, as well as in India.

The nest, composed of sticks, is generally placed on buildings, where, in Europe, the birds are often encouraged to make their homes by the fixing of a cart-wheel or some other staging. They will also build on wood- or straw-stacks as well as in trees. The eggs, usually four in number, are white in colour.

The food consists of worms, reptiles and insects, as well as young birds and small rodents, which the bird obtains in the pastures and marshes.

The White Stork appears to be voiceless, but in the breeding season makes a loud clatter by the striking together of the mandibles. According to the late Colonel Irby (*The Ornithology of the Straits of Gibraltar*), "Storks usually migrate in large flocks at a great height, with a gyrating flight."

The sexes do not differ in colour.



Great Egret
White Stork

Flamingo
Black Stork

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THE BLACK STORK.

Ciconia nigra, Linnæus.

PLATE 42.

Rarer than the last-mentioned species, the Black Stork has been recorded in England about twenty times, two of these having occurred in the Scilly Islands. According to the B.O.U. "List of British Birds," 2nd ed., it "breeds in Europe and Asia, ranging from southern Sweden and central Russia eastwards across Siberia, south of about 55° N. latitude, to Mongolia, southwards to Spain, Turkey, Palestine, Persia, Turkestan, and north China. In winter it visits Africa, ranging southwards to the Cape and to India." In habits it differs from the White Stork, avoiding the neighbourhood of human dwellings, and making its home in forests of tall trees near marshy ground, and sometimes on cliffs. The nest is built of sticks, with a lining of grass and moss, and occasionally the birds occupy the former habitations of other species. The eggs vary in number from three to five, and are a dull white in colour.

Howard Saunders states (*Manual of British Birds*, 2nd ed.), "When the shell is held to the light the lining membrane shows *green*, whereas it is yellowish in the egg of the White Stork."

The Black Stork feeds on frogs and other reptiles, fishes, and insects, obtained in the marshes. It makes a clattering sound with the bill, like that produced by its congener.

The male and female do not differ in colour, but the immature bird is of a brownish colour on the upper parts, with the feathers mostly margined with dull white.

FAMILY IBIDIDÆ.

THE GLOSSY IBIS.

Plegadis falcinellus, Linnæus.

PLATE 41.

The Glossy Ibis ought by rights to have appeared on Plate 42 along with the Storks and Spoonbill, but to prevent it being represented on too small a scale I have placed it with the Bitterns.

Nearly every year this species arrives as a Bird of Passage on our coasts, generally coming in the autumn months, more often seen on the southern and eastern shores of England, ranging as far north as Yorkshire. About twenty have been noted at different times in Scotland, in addition to a flock of a similar number which was observed in the Orkneys in the autumn of 1907. About forty occurrences have been recorded in Ireland. The Glossy Ibis is widely distributed over the Old World, and is also found in the south-eastern United States, whilst a closely allied form inhabits the southern parts of the same region, and also South America.

During the breeding season the birds associate in large colonies; their nests, composed of the stems of reeds and twigs, are placed low down on the branches of bushes among the marshes, or in thick reed-beds.

The eggs are a deep greenish-blue in colour, and are usually four in number.

The food consists of worms, crustaceans, water-insects, frogs, &c. Lord Lilford describes the only note he ever heard from these birds as "a decidedly corvine, prolonged, guttural croak."

Formerly the Glossy Ibis seems to have visited our shores more frequently than at the present time, as Lubbock, writing in 1845 of its occurrence in Norfolk, as quoted by Stevenson (*Birds of Norfolk*), stated that "fifty years back it was seen often enough to be known to gunners and fishermen as the black curlew."

Some twenty years ago the late Lord Lilford had a small flock of this species in his aviaries, and in his *Coloured Figures of the Birds of the British Islands* refers to the curious attitude they assumed in warm weather. I had opportunities of watching these birds as they stood in an upright position, with one side facing

THE GLOSSY IBIS

the sun, and the wing opened to its full extent and pointing upwards; they would bask in this manner, and seemed to enjoy the warmth on their bodies. When the wing is closed, the long axillaries usually protrude below the other feathers, as shown in the picture which was taken from one of the birds above referred to.

The sexes do not differ in colour, but the immature bird is of a dull blackish-brown, with some whitish streaks and patches on the head and neck.

FAMILY PLATALEIDÆ.

THE SPOONBILL.

Platalea leucorodia, Linnæus.

PLATE 42.

Although the Spoonbill at one time bred in various English counties, including Norfolk, Suffolk, Sussex and Middlesex, as well as in Wales, it is chiefly known at the present time as a Bird of Passage in spring and autumn on the southern and eastern coasts, although it occurs as an autumn straggler in other parts. Professor Newton has proved that it nested in Norfolk in the reign of Edward I, and Mr. Harting in *The Zoologist* has shown that it also bred at Fulham in 1523, and near Goodwood in 1570, whilst Sir Thomas Browne, writing of it in 1688 in Norfolk, as quoted in Stevenson's *Birds of Norfolk*, says, "The Platea or Shovelard, which build upon the tops of high trees. They formerly built in the hernery at Claxton and Reedham; now at Trimley, in Suffolk. They come in March, and are shot by fowlers, not for their meat, but for the handsomeness of the same; remarkable in their white colour, copped crown and spoon or spatule like bill." The Spoonbill occasionally visits Scotland and Ireland, and is a summer visitant to Central and Southern Europe, having also a wide range over Asia and Africa. In winter it migrates from its more northern range to Central Africa and India. The birds usually breed in colonies, and place their nests, composed of a mass of dead reeds, on the mud among the thick cover of marsh vegetation, sometimes low down on the branches of willows and alders, or often in high trees. The eggs, generally four in number, are dull white, spotted and marked with rust-colour.

When seeking its food, which consists of small fishes, reptiles, molluscs, crustaceans, &c., the Spoonbill frequents open marshes and mud-flats, probing the soft ground with its peculiarly shaped bill.

Lt.-Commander J. G. Millais has kindly supplied me with the following note regarding this species in Africa. "I have observed a flock feeding in a semi-circle in shallow water. They advanced moving their bills from side to side like a mower cutting hay. The prey was some species of water insect."

It appears to be a more or less silent bird, but Seebohm states that it makes "a sharp snapping sound with its bill."

The female has a smaller crest, but otherwise does not differ much from the male. In winter the head plumes of both sexes show very little development, and in the young bird these feathers are absent.

Order ODONTOGLOSSÆ.

FAMILY PHÆNICOPTERIDÆ.

THE FLAMINGO.

Phœnicopterus roseus, Pallas.

PLATE 42.

About fifteen occurrences of this beautiful bird have been recorded in Great Britain, but of this number three only appear to have been really wild birds. The first was captured and killed in Staffordshire in September 1881, the second shot near the Beaulieu River in Hampshire in November 1883, and the third seen near New Romney, Kent, in August 1884.

The Flamingo inhabits parts of Spain and southern France, thence eastwards in Asia to Lake Baikal, and southwards to India, and is found throughout the greater part of Africa.

A most interesting account of the nesting of the Flamingo has been given by Mr. Abel Chapman (*Ibis*, 1884, pp. 86-89), who was the first to give an accurate description of the manner in which the birds disposed of their long legs when sitting on the nests, which are merely circular platforms or bulwarks of mud raised a little above the surface of the shallow water, and varying in height from two or three inches to a couple of feet. Instead of standing astride the nest, as described by the old English navigator, William Dampier, Mr. Chapman has shown that the birds sit with "their long red legs doubled under their bodies, the knees projecting as far as beyond the tail, and their graceful necks neatly curled away among their back feathers, like a sitting swan, with their heads resting on their breasts."

The Flamingo breeds in large colonies, masses of nests being often crowded together in the shallow water of the lagoons.

The two eggs, with a rather chalk-like surface, are laid towards the end of May. The birds seem very partial to salt-lakes, and obtain their food of tiny crustaceans by dabbling in the water, holding their heads and curiously formed bills in a reversed position while sifting the mud. The gaggling voice of this species resembles that of the Goose, and, like the latter bird, it adopts the same formation when flying.

The sexes do not differ in colour, but the female is smaller. The young take a considerable time before assuming the pink and scarlet of the old birds.

Order ANSERES.

FAMILY ANATIDÆ.

THE GREY-LAG GOOSE.

Anser cinereus, Meyer.

PLATE 43.

The Grey-Lag Goose, from which species our domestic bird is said to be derived, is the only resident wild Goose in the British Islands. Until about the beginning of last century it still bred in the English fens, but at the present time it is only known to nest in parts of north and north-western Scotland, viz. in the counties of Ross, Caithness and Sutherland, and on the Outer and some of the Inner Hebrides.

During winter its numbers are increased by immigrants, when it is more generally spread over the country, although always scarce on the east coast of Scotland.

It is now only a rather rare winter visitor to England, occurring more frequently in the southern and western parts than in the eastern counties, and the same may be said as regards Ireland. The Grey-Lag Goose breeds in Iceland and in various portions of the Continent of Europe from Scandinavia to Spain, ranging eastwards in Asia through Siberia as far as Kamchatka. In winter it is common in Southern Europe, North Africa, and parts of India. The Grey-Lag is the largest of the British wild Geese, the word *lag*, according to Professor Skeat (*Ibis*, 1870, p. 301), signifying late, last, or slow, which came to be applied to this bird because it lagged behind and nested in our fens when the other species left for their breeding stations in the far north. Professor Newton in his *Dictionary of Birds* quotes an interesting fact mentioned by Mr. Rowley (*Orn.*, Miscell. iii. p. 213), that to this day the tame Geese of Lincolnshire are urged on by their drivers with the cry of "Lag 'em, Lag 'em."

The nest, which is placed on the ground among grass and heather, is built of sticks, dead reeds and sedges, and the eggs, protected by down from the breast of the female, are dull creamy-white in colour.

Mr. Talbot Clifton has very kindly supplied me with some notes on the Grey-

THE GREY-LAG GOOSE

Lag Geese inhabiting South Uist, obtained from his gamekeeper, Murdoch MacDonald, a most careful observer. Owing to want of space I have been obliged to condense them as follows :

This Goose breeds in the Outer Hebrides, nesting on the islands of fresh-water lochs, and lays from four to eight eggs, the average number of the broods consisting of about five birds.

The female sits very closely on her eggs, almost allowing herself to be handled before moving off. They pair in March, and by the end of April or early in May the young are hatched. As soon as the latter are able to fly they come down to the low ground or "machars," where they choose a flat place as their camp. In this sanctuary they remain for a fortnight or so, and as soon as they have acquired their full powers of flight, move about in search of the best feeding ground. When the grain is ripe they frequent the harvest fields, but feed chiefly on grass and plant roots, and also in hard weather are seen among the turnips and in potato fields. Their usual feeding hours are in the early morning and again in the evening, the birds generally resting during the day on some fresh-water loch. They are difficult to stalk, as they always take care not to approach within range of any wall or dyke.

It is seldom possible to drive them twice over the same ground if they have once been shot at, as "they shy the place where they have been cheated, and change their course in the opposite direction." When a flock is feeding, one or two of the old birds are always posted as sentinels, who at once give the alarm if anything suspicious is seen or heard, when they all take wing to safer quarters. On moonlight nights they become much bolder, often at such times approaching steadings, but always taking their departure very early before anyone is astir.

Some twenty years ago my friend Mr. J. H. Dixon had a small flock of this species living in a semi-domesticated condition at Inveran, by Loch Maree. These birds roamed about at their own free will, and I have often seen them in company with wild Grey-Lags, which acquired a certain amount of tameness from association with the others; and at times they might all be seen feeding in the fields near the house.

When travelling, this and other kinds of Wild Geese fly in a wedge-shaped formation. The four species drawn on Plate 43 represent what are known to shore-shooters as "Grey" Geese, who thus distinguish them from the so-called "Black" Geese (the Brent and Bernacle).

The colour of the Grey-Lag's bill is orange with a white nail, the latter forming a ready means of distinguishing it from the Pink-footed and Bean Geese, in both of which the nail is black. The sexes as in all our Geese do not differ in colour.

THE WHITE-FRONTED GOOSE.

Anser albifrons (Scopoli).

PLATE 43.

This species is easily distinguished from the Grey-Lag by its smaller size, white forehead and orange legs, although in both the nail on the bill is white.

The black bars on the breast are strongly marked, whereas in the other there are only a few small dark spots.

Only known as a winter visitant to the British Islands, the White-fronted Goose is more numerous on the western portions than on the east coast, although, according to Millais, it is common in the Orkneys and Shetlands on migration in spring.

It is abundant in Ireland, more so than the other "grey" Geese.

The White-fronted Goose goes very far north to its breeding stations among the tundras and on the islands of Arctic Europe and Northern Asia, migrating in winter to the warmer parts of Europe, as well as to Egypt and India.

The nest does not differ from that of other members of the genus, and contains from four to six eggs, of a yellowish-white colour.

The bird feeds on grass, &c., and has been named "Laughing" Goose on account of its cry.

The Lesser White-fronted Goose, *Anser erythropus*, a smaller and darker bird, with the bill also smaller, and having the white on the crown extending farther backwards, breeds in northern Scandinavia, and has been recorded more than once in England. This was considered by Professor Newton and Howard Saunders as only a form of the White-fronted Goose, but others have given it the rank of a species.



Anas platyrhynchos
Mallard Duck
Pintail Duck

Branta canadensis
Canada Goose

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THE BEAN-GOOSE.

Anser segetum, J. F. Gmelin.

PLATE 43.

This species differs from the Grey-Lag and White-fronted Geese in having a black nail on the point of the bill, which is orange as far as the nostrils, and then black at the base. Comparing it with the Pink-footed Goose, Lord Lilford says (*Birds of Northamptonshire and Neighbourhood*): "In appearance on wing, note, and habits—in fact, in almost every particular except that of size, and a few slight differences that are imperceptible at a distance—the Bean-Goose so closely resembles the Pink-footed that I could never be quite certain of distinguishing between them except when 'in hand,' and even in the latter case I have found that some of the external characters quoted by authors as distinctive are by no means constant. As a rule, I think that the Bean-Goose on its travels adheres more strictly to the single file or horizontal <-formation than other species."

The Bean-Goose visits us in the autumn, coming soon after harvest, and remaining through the winter. It is said to occur more frequently on the western coasts of England and Scotland than the eastern, and is common in Ireland. It goes north to breed in Kolguev, Novaya Zembla, and other lands within the Arctic Circle, returning to the more temperate parts of Europe and Western Asia for the winter.

According to Seebohm's *British Birds*, in the breeding season it "repairs to the lakes on the tundra, and chooses a hillock on the bank, or an islet in the lake itself where the rushes and sedge are tall enough to conceal the sitting bird. A slight hollow is scraped in the soil and lined with grass, moss, sometimes a few feathers, and always plenty of the light grey down of the bird itself." The eggs vary from three to four or even six in number, and are creamy-white in colour.

THE PINK-FOOTED GOOSE.

Anser brachyrhynchus, Baillon.

PLATE 43.

The late Mr. A. D. Bartlet has the credit of having first brought to the notice of British naturalists in 1839, that this short-billed species differed from the other "Grey" Geese, but he was unaware that it had been already distinguished by Baillon. As previously mentioned, it closely resembles the Bean-Goose, but may always be recognised by the shortness of its bill. According to Lord Lilford, the pink colour of the legs and feet is not constant, or to be certainly depended upon.

On the eastern coast of England it appears to be by far the most numerous species, being scarcer in the west and south.

The B.O.U. "List of British Birds" (1915) states that "it breeds in Spitsbergen, almost certainly in Iceland, and probably also in Franz Joseph Land. It winters in North-western and Western Europe."

Little appears to be known about the nest, but it is said to be so placed that the bird can obtain a wide view of its surroundings, and the eggs are described as being the same as those of the Bean-Goose in colour.

I have received from Mr. R. J. Howard the following notes describing the arrival of the Pink-footed Geese at the Ribble estuary on September 26, 1915, as seen by Mr. W. Pennington of Southport:

"The birds, about two hundred in number, were heard before they could be seen, so great was the height. They descended in small gaggles of eight or ten, led by a single bird, in a wide spiral, and were so tired, that they went straight to sleep and allowed the gunner to walk in the open almost within shot before they rose."

THE SNOW-GOOSE.

Chen hyperboreus, Pallas.

PLATE 44.

This rare straggler to the British Islands, of which there are two forms, differing merely in size, visits us at irregular intervals, the greater number of those obtained having been captured or shot in Ireland, and all belonging to the smaller race, except one obtained near Belmullet, co. Mayo.

The larger race breeds in Arctic North America, migrating southwards in winter, whilst the summer home of the lesser appears to be eastern Siberia and western Arctic America. According to the late H. E. Dresser (*A Manual of Palæarctic Birds*), the Snow-Goose "breeds on the Arctic barren grounds near lakes, the nest being a hollow well lined with down, and "the eggs, usually five in number, are white."

It feeds on grass and other vegetable matter, as well as on berries and shell-fish.

The bird shown on the plate was painted from a beautiful living specimen at one time in the Zoological Gardens of London.

The young are brownish-grey on the upper parts—the feathers on the back and wing coverts having darker centres—and dull white below.

THE RED-BREASTED GOOSE.

Bernicla ruficollis, Pallas.

PLATE 44.

This beautiful species occasionally visits Great Britain during the winter months, two having been obtained about the same date (1776) in Middlesex and in Yorkshire, another at Berwick-on-Tweed (1818), a fourth in Essex (1871), and the last in Gloucestershire (1909). Others are said to have occurred in England.

In summer the Red-breasted Goose inhabits the tundras of western Siberia, nesting in the valleys of the Obi and Yenisei, and migrating in winter to the Caspian Sea and other parts of Asia. Occasionally it visits Western Europe, and in far-away times was certainly known to the inhabitants of Egypt, though rare in that country at the present time. The late Lord Lilford owned a specimen labelled "Alexandria, December 2nd, 1874, which was figured in his work on British Birds.

What is said to be one of the oldest, if not the oldest, picture in existence, painted some five or six thousand years ago, the well-known slab from a tomb at Maydoom, Egypt, gives a most accurate representation in colours of a pair of these birds. I have in my possession a photographic reproduction of this fresco in black and white, which shows that the painter must have drawn them from life and was familiar with the species. In the same group are also shown two of the Lesser White-fronted Geese and an equal number of a larger species, either the Grey-Lag or Bean-Goose, these last depicted in a most natural manner browsing on the herbage.

Mr. H. L. Popham found four nests of the Red-breasted Goose situated at the foot of cliffs on the Yenisei in 1895. The eggs varied in number from seven to nine, and were creamy-white in colour.

The bird feeds on grass and other herbage, and, according to Radde, who observed it during winter on the Caspian Sea, it associates in flocks, which frequent pastures by day and retire to the water at night.

Young birds in their first plumage lack the rich black and chestnut of the adults; the ear-patch is brown mottled with white, the neck and breast reddish-buff, and the upper parts, which are black in the old birds, are brown.



Black-necked Stilt
Greater White-fronted Goose

Red-throated Loon
Snow Goose

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THE BERNACLE GOOSE.

Bernicla leucopsis, Bechstein.

PLATE 44.

Rather rare on the eastern coasts of Great Britain, the Bernacle is a common winter visitor to the Outer and Inner Hebrides, the western shores of Scotland, and north-western coast of England, becoming less numerous towards the south of the latter country. Large flocks visit the shores of the northern half of Ireland in winter, but seldom the south.

The Bernacle breeds within the Arctic Circle, on the eastern side of far-away Greenland, in Spitsbergen, and other remote regions. Little appears to be known about the nidification of this species, but Millais tells me, on the authority of the Danish explorer Mickelsen, that the latter found the Bernacle Goose breeding in colonies on steep cliffs in north-east Greenland.

The eggs laid by birds in captivity are white.

I am indebted to Mr. Talbot Clifton for some particulars regarding these birds in the Outer Hebrides, furnished by Murdoch MacDonald, gamekeeper, South Uist.

The Bernacles arrive there every year about the 25th October, and at first, owing, perhaps, to the number of young birds among them, are much tamer than they become at a later time.

After having rested for ten days or so, they begin to move about from one place to another, feeding during the day and also on moonlight nights. Their food consists entirely of grass.

Before leaving for their breeding grounds in the far north the birds become very wild, and at last congregate in one large flock on the extreme outermost point of land in the Atlantic, when they all take their departure together, between the 20th April and the end of the month. Occasionally birds which have been wounded remain throughout the summer, but these never breed.

It is hardly necessary to allude here to the quaint legend, popular in former days, of the generation of the Bernacle Goose from the shell-fish of the same name, attached to floating timber in the sea. Macgillivray describes the voice of this species as clear and rather shrill, and as coming agreeably to the ear when the cries of a large flock are heard at a considerable distance.

THE BRENT GOOSE.

Bernicla brenta, Pallas.

PLATE 44.

This salt-water species, in ordinary circumstances never leaving the sea-coast unless wounded, is by far the most numerous of the geese which come to our shores in the winter. According to Millais, the Brent is only a very rare straggler to the Orkneys and Shetlands, while its "most noteworthy resorts are the islands in the Cromarty and Moray Firths, where it is exceedingly abundant." It is also very numerous along the east coast to the south of England. The mud-flats near Holy Island, Northumberland, is a favourite resort, where vast numbers arrive during January and February. Large flocks also visit the Irish coasts. In spring the Brent Geese leave us for their breeding stations in the Arctic regions, including Spitsbergen, Novaya Zembla, Kolguev, Greenland, and eastern North America. There are two forms of this species, both of which visit the British Islands, one coming from America having the flanks and underparts of a lighter grey, and the other, a darker bird, from Arctic Europe and Asia.

The Black Brent, *B. nigricans*, found on the western side of North America and Arctic Asia, distinguished by a white collar almost encircling the neck, and by the black on the breast being more widely spread over the lower parts, is said to have been obtained on several occasions in England, but, according to the B.O.U. "List of British Birds" (1915), "its occurrence must be regarded as by no means proven."

Colonel Feilden, who found the nests of the Brent in Grinnel Land, describes them as being made of grass, moss, and the stems of saxifrages, and plentifully lined with down. The four or five eggs are creamy-white in colour.

The cries made by a flock of these geese have been often likened to the sound made by hounds, and no doubt gave rise to the superstition current in old days among country people, that packs of clamorous and shadowy spectre-dogs, known as Gabriel's Hounds, coursed through the air on cloudy nights.

Mr. Abel Chapman, who has given us an interesting account of the habits of the Brent in his *Bird-Life on the Borders*, says: "Speaking generally, they spend the night at sea and the day on the tidal oozes, but never (like the Grey Geese) go inland to feed on the fields, or travel a single yard beyond high-water mark."

THE BRENT GOOSE

Brent Geese are much sought after by punt-gunners, not only on account of the sport afforded, but by reason of their excellence for the table. They are very wary and difficult of approach, unless tamed by severe weather.

Their food consists chiefly of the sea-grass *Zostera marina*, obtained on the mud-flats at low tide.

It is well known that wild fowl and other migratory birds fly at a great height when travelling, and move at an astonishing speed. Referring to this subject, a correspondent in the *Field* (December 4, 1915) gives some very interesting notes. He says, "While flying on duty between Béthune and La Bassée at a height of 8500 feet this afternoon (November 26), I was astonished to see a flock of about 500 ducks or geese passing over Béthune at least 3000 feet above the level of our machine. The wind was about 45-50 m.p.h. N.N.E., and the birds were travelling due south. They were flying at a tremendous speed, and were soon out of sight, as we were flying north." This shows that the birds were at an altitude of about two and a quarter miles, and probably quite out of sight from the ground.

THE WHOOPER SWAN.

Cygnus musicus, Bechstein.

PLATE 45.

Known also as the Whistling Swan, Wild Swan, and Elk, this fine bird is said to have bred in the Orkneys towards the end of the eighteenth century. Now it only visits the British Islands in winter, more often seen in Scotland than elsewhere, though considerable flocks sometimes frequent the shores of England in severe weather. It is rare in Ireland.

In spring the Whooper leaves us for its breeding grounds in Iceland and the northern parts of Europe and Asia. Seebohm, who found this swan nesting in the delta of the Petchora, says in his *British Birds*, "We found several nests between the 19th and 30th June; they were large structures, composed of dead sedge and coarse herbage, and concealed in the dense willow-scrub that covered most of the islands." The eggs vary in number from two to seven, and are creamy-white in colour.

The loud trumpet-like notes of the Whooper, from which it derives its name, are usually uttered on the wing.

The food consists chiefly of the roots of aquatic plants, which the birds obtain by plunging their heads and necks beneath the water. St. John noticed that when feeding they were usually surrounded by surface-feeding ducks, which secured the remains discarded by the larger birds.

This species, besides being about one-third larger than Bewick's Swan, may always be distinguished from the latter by the larger patch of yellow on the base of the bill, this colour extending below and beyond the nostril towards the tip and backwards to the forehead, whereas in Bewick's Swan the yellow does not reach the nostril, and the black extends along the whole length of the ridge of the upper mandible.

The immature bird is a dull brownish-grey colour, resembling the young of our common Swan, and has the bill of a greyish-flesh tint, with the margins and tip black.

When travelling, Wild Swans usually fly in a wedge-shaped formation, with their long necks outstretched to their full extent. The flying birds shown in the distance on Plate 45 were drawn from a sketch made in October 1890 of a flock of eight passing over the Moray Firth. The birds forming the sides of the wedge were unequal in number, five following the leader on one side and two on the other.



SWAN AND DUCKLING

SWAN AND DUCKLING

SWAN AND DUCKLING

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BEWICK'S SWAN.

Cygnus bewicki, Yarrell.

PLATE 45.

This Swan was first shown to be distinct from the last-mentioned species by Yarrell in 1829, and is said to have been also recognised about the same time by R. Wingate of Newcastle. It regularly visits Scotland, more particularly the Hebrides, and often in hard winters England and Wales. It is said by some to be rarer than the Whooper in the last-mentioned countries, but Lord Lilford considered that the one species was at least as common a visitor as the other in winter to the eastern coast and inland waters of England. In severe weather Bewick's Swan appears on the Irish coast in large flocks, and, according to Sir R. Payne-Gallwey, is more common than the larger species.

The summer home of Bewick's Swan is within the Arctic Circle in North-eastern Europe and Asia, but I find, according to my authorities, that its range lies more to the eastward than that of the Whooper.

The nests and eggs of the two species closely resemble each other, and I can discover no account of their habits differing in any particular. Seebohm describes the notes of Bewick's Swan as a "musical bark."

THE MUTE SWAN.

Cygnus olor (J. F. Gmelin).

PLATE 45.

It is not known with any certainty when the Mute or Tame Swan was first brought to England, but the date of its introduction is said to go as far back as the twelfth century, its first coming, like that of our common Pheasant, being wrapped in mystery. This species is the common Swan of our lakes and rivers, where large numbers live in a semi-domesticated condition; these are increased at times by the arrival of more or less wild birds from the Continent of Europe. There it breeds in many places in a perfectly wild condition, notably in Denmark, southern Sweden, Germany, Austria, and elsewhere.

The nest is a large piled-up structure of dead reeds and other vegetation, and contains from five to eight eggs of a greenish-grey colour. When the female is sitting I have noticed that the male is never far away, and on the nest being approached by anyone, he will boldly swim up and remain on guard near the spot until the intruder withdraws.

The Mute Swan is not always silent, as in the breeding season, according to Naumann, the bird utters a loud and trumpet-like note. In tame Swans the call notes are softer. It is easily distinguished from the two other species by the large black tubercle at the base of the upper mandible, the greater portion of the latter being of a deep orange colour.

What Yarrell described as a new species (*Proc. Zool. Soc.*, 1838, p. 19), which he named *Cygnus immutabilis*, commonly known by its English name of Polish Swan—though it seems to have had no connection whatever with the country its name suggests—is now considered to be only a variety of the Mute Swan.

It was supposed to differ from the latter bird in having, when adult, a smaller tubercle and slaty-grey legs and feet, the colour of the young being white instead of the usual brownish-grey of the other's cygnets.

Curiously enough, with one exception—a bird from the Lake of Haarlem in Holland—all the so-called "Polish" Swans have occurred in the British Islands.

THE COMMON SHELD-DUCK.

Tadorna cornuta (S. G. Gmelin).

PLATE 46.

The Common Sheld-Duck, known also by various local names, such as "Burrow-Duck," "Bar-Gander," "Sand-Goose," and others, is a resident species in the British Islands, and plentiful on many parts of our coasts, especially where there are long stretches of sandy shore and bent-covered dunes, being seldom found far from salt or brackish water. It has a wide range over Europe, from northern Scandinavia to the Mediterranean countries, and it also visits North Africa in winter. In Asia it inhabits localities which suit it as far east as Japan, and north to the southern parts of Siberia, while in the cold season its range extends to north India and China.

The seven to twelve creamy-white eggs are usually laid, either within a rabbit burrow or in a cavity at the end of a tunnel excavated by the bird, a warm nest of dry bents and moss thickly lined with down being prepared for them.

The food consists mainly of sea-worms, molluscs and various small marine creatures, as well as sea-weeds, sought for by the bird on the flats at low-water.

Seebohm states that the call-note of both sexes is a "harsh quack," and that during the breeding season the male utters "a clear rapidly repeated whistle or trill." At all times the Sheld-Duck is a conspicuous and handsome bird, and readily recognised even at a distance by its strongly contrasted plumage. It is easily tamed, and is a favourite on ornamental waters. St. John, in his *Wild Sports and Natural History of the Highlands*, has given some interesting notes on their habits, telling us how, at low-tide, they obtain the sea-worms which form a good portion of their food. Locating their prey by the worm-casts, they pat the ground with their feet, thus causing the creatures to come to the surface. He also noticed how the sitting female always leaves her nest at low-tide, so as more easily to obtain her food. In colour, she is rather duller than the male, and has only a trace of the knob at the base of the bill.

THE RUDDY SHELD-DUCK.

Tadorna casarca (Linnæus).

PLATE 46.

This species is a rather rare visitant to the British Islands, and was first recorded in 1776, when a specimen was killed near Blandford, Dorsetshire. On the Continent of Europe it favours the south-eastern parts more than the western, nesting, it is said, in some numbers on the Lower Danube, while a few breed in southern Spain. It inhabits North Africa, and has a wide range over Asia. In India, where it is plentiful, it is known as the "Brahminy Duck."

The Ruddy Sheld-Duck nests underground in various situations. The late Mr. Salvin and Canon Tristram found it breeding in crevices among cliffs, while such sites as burrows, hollow trees, and even the old nests of birds of prey are also chosen. Mr. E. H. Wilson (*A Naturalist in Western China*) says, "I once found a couple breeding in the margin of an alpine lake near Tachienlu, at 15,500 feet altitude." The eggs, varying in number from eight or nine to sixteen, are creamy-white in colour.

It has a loud uncouth cry, repeated several times, which has been syllabled as *Kark*.

The food consists of various aquatic insects, molluscs, grass, &c.

Unlike the Common Sheld-Duck, this species prefers inland lakes and rivers to the sea coast.

The female resembles the male in colour, but is without the narrow black collar.



Mallard, 1846
Reddy Siela-Duck

Goldeneye, 1846
Common Goldeneye

THE MALLARD.

Anas boscas, Linnæus.

PLATE 46.

The Mallard, perhaps better known as Wild Duck, and the origin of our domestic species, is widely distributed not only in the British Islands, where it breeds in every county, but throughout the world. In winter the number of Mallards in our country is greatly increased by flocks arriving from the Continent of Europe, owing to the freezing of their northern feeding grounds.

The nest, built of grass and warmly lined with down, although usually hidden among reeds and other cover near water, is often situated on the tops of pollard willows or in hollow trees. The eggs, of a pale greenish-grey colour, vary in number from about seven to twelve.

The Mallard is more or less omnivorous, eating small fishes, molluscs, slugs, worms, &c., as well as vegetable products and grain, and it usually feeds by night. When on the coast the birds generally spend the day at sea or in the estuaries, resting and preening their feathers, and as soon as darkness begins, come in to the mud-flats and marshes, or to stubble or potato fields.

It is hardly necessary to describe the notes of this species, but those uttered by the drake are much lower and more husky than the duck's.

By nature the Mallard is shy and wary, and a flock will circle many times over a sheet of water before making up their minds to settle.

In days gone by great numbers of this species, as well as other ducks, were caught in decoys, an ingenious arrangement of reed-screens and netting, into which the birds were lured to their destruction.

Being a surface-feeder, the Mallard does not as a rule seek its food by diving, but according to Lt.-Commander J. G. Millais, our greatest living authority on all that pertains to the duck family (*The Natural History of British Surface-feeding Ducks*, p. 3), "The real exceptions to the rule are to be found in the immature birds—the birds three-quarters grown, and still unable to fly. At this stage of life the Mallard, encouraged by their attendant mothers, gain much of their food by diving."

The same author has given us a complete history of the curious change of plumage which takes place in the males of this species and other ducks during

BRITISH BIRDS

summer. It appears that this annual change into what is known as the eclipse plumage, which resembles more or less that of the female, commences in England as early as May 20th and in Scotland about July 1st. By degrees all the gay colours disappear, being replaced by new feathers of brown and buff, and finally the quill feathers of the wings are moulted, leaving the bird in a helpless condition as far as flight is concerned. Were it not for this protective colouring, the birds would have a poor chance of surviving during this critical period. It is not possible to give further details here, except to say that by October 1st the normal plumage of the Mallard has been entirely resumed.

The Bimaculated Duck, of Latham and other authors, figured by Bewick and described as a species, is now known to be only a hybrid, by some considered a cross between the Wigeon and Teal, but the late Lord Lilford, after handling a specimen caught in his decoy in December 1894, was satisfied that the parents were Mallard and Teal.

THE GADWALL.

Anas strepera, Linnæus.

PLATE 46.

This elegantly shaped, dull coloured species, though locally abundant in some favoured districts in winter, is otherwise a rather uncommon visitor to most parts of the British Islands. In Norfolk, where a fair number breed every year, it was originally established as a resident by the introduction of a pair of pinioned birds about sixty years ago, and large numbers now visit this county during the winter. It also breeds in Suffolk, and within the last few years has nested in southern Scotland, also coming to the western islands, especially Tiree, in the cold season, at which time it visits Ireland.

The Gadwall is found generally throughout Europe, breeding as far north as Iceland, while in winter many visit the basin of the Mediterranean and North Africa. It has also a wide range over Asia as well as in America.

The nest, built of dead grass and flags, is warmly lined with down and placed on dry ground, sometimes near, sometimes at a distance from the water. The eggs are buffish-white, and vary in number from eight to fourteen.

Lt.-Commander J. G. Millais says (*Natural History of British Surface-feeding Ducks*), "Although it will rest at sea by day, the Gadwall is even less a marine bird than the Mallard, yet in most of its habits it closely resembles that species; and, though not naturally so cunning as the wild duck or the Wigeon, is much more shy and retiring in its ways. It loves quiet and sheltered nooks, still waters and sluggish streams, where it feeds on a vegetable diet composed chiefly of water-plants, their seeds, and fresh-water molluscs. In summer it is very fond of insects, and spends much time in catching flies and water-beetles; but on the whole it is, except in the courting season, the most undemonstrative of ducks. Floating motionless in the shadows, or lying hidden in the reeds, the birds seldom attract the attention of the passer-by unless flushed from their shelter, which they are commonly loth to leave."

Lord Lilford describes the call of the male Gadwall as "a sharp shrill rattling note continually repeated, whilst the female responds with a 'quack' resembling that of the Wild Duck."

When at a distance on the water, the females of the Gadwall and Mallard look much alike, but the former may always be distinguished by the white speculum on the wing.

THE SHOVELER.

Spatula clypeata (Linnæus).

PLATE 47.

During the last forty years or so the Shoveler has greatly increased as a breeding species in the British Islands, especially in Scotland and Ireland, whilst in England it is best known as a spring and winter visitor, though nesting regularly in Norfolk and Lincolnshire, and more or less in many other counties. It breeds in Europe from about as far north as the Arctic Circle southwards to the Mediterranean countries and also in North Africa, but in the latter country it is more plentiful in winter. Eastwards across Asia it is found as far as Japan and southwards to India, whilst it has also a wide range in America. This species, according to Millais, "makes a deep nest of fine grass, and will place it in open grassy land near water, but not in rank vegetation. As a rule it is very well hidden, and, the parent bird sitting close, it is difficult to find." The eggs, varying in number from eight to fifteen, are greenish-buff in colour.

The Shoveler is a decidedly fresh-water duck, very seldom found on the sea, and obtains its food, consisting of water-insects, worms, molluscs, &c., as well as grasses, duck-weed and seeds, among the bogs and marshes of inland waters. It has a characteristic manner of feeding; plunging the broad and curiously shaped bill in the water, or holding it horizontally on the surface, it sifts the muddy liquid through the bristles with which the mouth is furnished.

The mated pairs in early summer may often be seen closely following each other in circles while feeding in this manner.

The Shoveler is a rather silent bird, but in the breeding season the male utters a low croaking note.



Teal
 American Blue-winged Teal
 Snow-billed Teal
 Pintail
 American Green-winged Teal
 Golden Teal

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THE PINTAIL.

Dafila acuta (Linnæus).

PLATE 47.

The Pintail is a regular autumn and winter visitor to the British coasts, sometimes arriving in large numbers, and of late years some have remained to breed in Scotland, notably in the Orkneys, Shetlands, the Hebrides, and on Loch Leven, the first record of its nesting on this loch dating from 1898. On the Continent of Europe it is found breeding from as far north as Lapland to Spain, and in the cold season it visits North Africa. It has a wide range over a great part of Asia, as well as in America.

The nest, built of grass and sedge, and well supplied with down, is usually situated at some little distance from the water. The eggs vary in number from seven to twelve, and are usually buffish-green in colour.

The food consists mostly of water-plants, insects, and molluscs.

In the breeding season the male Pintail utters a double whistling note with a peculiar "*click*" in it, very similar to that of a drake Teal.

In disposition and habits this species is a very wide-awake bird, frequenting open and wide stretches of fresh water or the estuaries of the sea, and feeds by day as well as by night.

THE TEAL.

Nettion crecca (Linnæus).

PLATE 47.

The Teal is not uncommon as a breeding species in many parts of the British Islands, being more numerous in the northern counties of England and in Wales than in the south, whilst it is plentifully distributed over the bogs and mosses of Scotland and Ireland. In autumn and winter its numbers are much increased by birds arriving on our shores from Northern Europe, which gather in large flocks on the coast or make their way inland, according to the severity of the weather. Ranging through the whole of Europe, it visits North Africa in winter, is found over the greater part of Asia, and occasionally occurs in eastern North America.

The nest, placed on dry ground, occasionally at some distance from water, and usually amongst tall heather or other cover, is plentifully lined with down, and contains from eight to fifteen eggs, of a buffish-white colour tinged with green.

The male Teal, according to Millais, occasionally utters a low double whistle, and the female when frightened or anxious about her brood will emit a subdued little "quack."

The food is similar to that of other surface-feeding ducks.

Although its favourite haunts are bogs and fresh-water marshes, the Teal will resort to the estuaries and sea-coast in hard weather, at which times they are much harassed by punt-gunners, and at all times are a favourite prey of the Peregrine Falcon. When startled, they will rise suddenly and shoot upwards, flying at a great pace, and on such occasions do not afford an easy mark for the gunner.

The females are excellent mothers, and show great affection for their young.

THE AMERICAN GREEN-WINGED TEAL.

Nettion carolinense (J. F. Gmelin).

PLATE 47.

This species has thrice occurred in Great Britain, the first obtained in Hurstbourne Park, Hampshire, about 1840, the next near Scarborough, Yorkshire, in November 1851, and the last on Kingsbridge estuary, Devonshire, on November 23, 1879. It is the representative of our European bird in America, and in summer is common in Canada and the United States, migrating in winter to the more southern parts of the New World.

The adult male is easily distinguished from the Common Teal by the white crescentic band on both sides of the breast, and by the absence of the white on the scapulars; the buffish lines on the head are also much less distinct, and the vermiculations on the flanks are finer. It requires an expert to distinguish the females of the two species, so closely do they resemble each other, whilst their nidification and habits in general are also alike.

THE AMERICAN BLUE-WINGED TEAL.

Querquedula discors (Linnæus).

PLATE 47.

This little duck, commonly known as the Blue-winged Teal, is closely related to the Garganey, and judging from some live birds I had an opportunity of watching in the Zoological Gardens of London, is not unlike the Shoveler in its actions and manner of feeding. It has been obtained three times in the British Islands, viz. in Dumfriesshire, 1858, on the Dee estuary, Cheshire, about 1860, and at Ballycotton, co. Cork, in September 1910.

The Blue-winged Teal breeds in North America, especially from the Rocky Mountains eastwards, and in winter migrates to the warmer parts of the United States, Mexico, Central America, and the West Indies.

Its nest, eggs, and habits in general do not differ from those of its congeners.

THE GARGANEY.

Querquedula circia (Linnæus).

PLATE 48.

The Garganey or Summer Teal is a rather scarce spring visitor to England, arriving in small numbers about the beginning of March, and breeding regularly, though sparingly, in Norfolk, Suffolk, and Kent. Elsewhere in England it appears to be rare, but it has nested in other counties besides those mentioned. It visits Ireland occasionally, though never breeding there, and in Scotland is said to have occurred on some of the islands in the north and west. It has a wide range over Europe from the regions south of the Arctic Circle to the Mediterranean countries, and eastwards across Asia to Japan, visiting Africa and India in winter.

The nest, composed of grass and sedge, and warmly lined with down, is often placed at some distance from the water, and is well concealed, sometimes in the drier parts of marshes, sometimes in rough pastures. The seven to thirteen buffish-white eggs lack the greenish tint of the Common Teal's, having a more pronounced creamy colour.

This species feeds principally on tiny fishes and water-insects.

The curious grating rattle uttered by the male may be heard in the breeding season.

The late Lord Lilford in his *Birds of Northamptonshire and Neighbourhood* says, "A flock of Garganeys twisting among trees presents a very remarkable appearance, from the simultaneous flashing in the sun of the blue-grey coverts of the male birds amidst the pale green of the early spring foliage."

THE WIGEON.

Mareca penelope (Linnæus).

PLATE 48.

The Wigeon is a common winter visitant to the estuaries and shores of the British Islands, frequenting also inland waters and river valleys. It nests in various parts of Scotland, more often in the northern counties of that country than elsewhere, although in recent years its breeding range has extended more to the southwards, and nests have even been recorded in the north of England and in Wales. The Wigeon ranges far and wide over Europe, from about the Arctic Circle southwards, breeding in the northern portions and migrating to the more temperate parts in winter, when it also visits North Africa. A few are sometimes found on the coast of North America as well as in Alaska.

The nest, well hidden amongst the cover of rushes, rank grass or heather, and having a snug lining of down, usually contains from seven to ten cream-coloured eggs.

The favourite feeding grounds of the Wigeon are the *Zostera-covered* mud-flats on our coasts, this marine vegetation forming the principal part of their diet, although they also eat other aquatic plants as well as animal food. For a short period after their arrival the birds, which often congregate in enormous flocks, are less wary and unapproachable than they afterwards become, and at first feed by day, but when much persecuted they change their habits and become nocturnal.

The call-note of the male is a shrill double whistle.



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[Faint, illegible text, likely a title or description of the ducks.]

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THE AMERICAN WIGEON.

Mareca americana (J. F. Gmelin).

PLATE 48.

This New World species, common in various parts of America according to the season, and known there to sportsmen as "Bald-pate," breeds in the northern portions of that continent, whilst its southward migrations in winter extend sometimes to Guatemala and Cuba. It is said to have been found breeding in Iceland. The American Wigeon has rarely visited Great Britain, and some of the records are doubtful, or may possibly refer to escaped birds. Two specimens, a male and female, were discovered by the late Mr. Bartlet, mixed with some Common Wigeon, in the London market in the winter of 1837-38, another appeared in a Leeds game stall in February 1895, and the last obtained was shot on the island of Benbecula, Outer Hebrides, in January 1907.

This species appears to be more of a fresh-water duck than our bird, and is said to nest on high and dry ground at some distance from water among the cover of trees and bushes. The eggs resemble those of its European congener, being of a creamy-white colour.

THE RED-CRESTED POCHARD.

Netta rufina (Pallas).

PLATE 48.

All the ducks hitherto described may be classed as "surface-feeders," these usually seeking their food on or close to the surface of the water, whilst the Pochards and other species which follow obtain it more or less by diving, and are easily distinguished from the former by the large lobe on the hind toe.

The Red-crested Pochard is a rather uncommon autumnal and winter visitant to England, mostly appearing on the East Coast, and in Scotland and Ireland only two occurrences have been reported, one in Argyllshire and the other in Kerry. Its true home is in Southern Europe, the birds ranging eastwards to Central Asia, and in winter visiting India. Large numbers are found in North Africa during the cold season, in which country it also breeds.

The nest, hidden among flags and rushes near water, contains from six to ten eggs of a decided greenish stone-colour, paler and greener than those of the Common Pochard.

The late Lord Lilford describes the winter cry of this species as a "rattling croak," and the pairing note of the male as "a low whistle."

It feeds chiefly on the roots of aquatic plants and other vegetable matter, as well as on water-insects, crustaceans, molluscs, fishes, &c., obtained both by day and by night.

In disposition it is shy and timid, and loves the seclusion of large sheets of deep, still water.

THE COMMON POCHARD.

Fuligula ferina (Linnæus).

PLATE 48.

The Common Pochard, Red-headed Poker, or Dunbird, as it is variously called, though breeding in some favourable places in some of our English counties, especially those along the eastern coast, is better known in our islands as a common autumnal visitor, usually arriving in October and leaving in the spring. It breeds on many of the Scottish lochs, but seldom in Ireland.

This species is widely distributed over Europe and Asia, the birds which nest in the colder parts moving for the winter to the Mediterranean countries, North Africa, Egypt, India, China, and Japan.

The Common Pochard is a more or less fresh-water species, seldom visiting the sea unless under necessity, and is most at home on wide stretches of inland water where it can find shelter and protection.

The nest is placed among rushes and thick herbage near the water, and usually contains from seven to nine eggs of a dull greenish colour.

The food consists of the roots and other parts of various aquatic plants and their seeds, and also of molluscs, water-insects, &c., mostly obtained by diving.

The alarm call of both the male and female is a jarring croak, and the former also emits in the breeding season a soft whistle.

THE FERRUGINOUS DUCK.

Fuligula nyroca (Güldenstädt).

PLATE 49.

The Ferruginous Duck or White-eyed Pochard is only known as an occasional visitor in the British Islands, and has been recorded more often in the eastern and southern parts of England than elsewhere. It is however common in Central and Southern Europe, breeding in many parts of that continent and in North Africa, as well as in the temperate regions of Asia. It winters in Africa and India. Lord Lilford says in his work on British Birds, "I have met with the White-Eye in various parts of Southern Europe and North Africa, and discovered a nest in Andalusia in 1872; this nest was placed amongst high rushes at a short distance from a small fresh-water lake, and was composed of dry flags and rushes, and lined with thick brownish down and a few white feathers."

The number of eggs appears to vary between six and fourteen. The colour of these, according to Millais, is generally "pale brown, sometimes with a faint yellow or greenish tint."

The food consists of roots and shoots of different water-plants, insects, and molluscs.

Lord Lilford describes the call-note of this duck as "a harsh rattling monosyllable, frequently repeated."

The White-eyed Pochard is said to be less shy of human beings than other ducks, is swift on the wing, and loves the seclusion of thick reed-beds and similar cover on fresh-water lakes and ponds.

An example of Baer's Pochard, *Nyroca baeri*, a Siberian species, was obtained on the Tring reservoirs, Hertfordshire, in November 1901. This bird had probably escaped from captivity.



Tufted Duck - *Acrostelasma pusillum*
 Ring-billed Gull - *Larus delawarensis*
 Goldeneye - *Goldeneye*
 Long-tailed Duck - *Cluella obscura*
 Pintail - *Goldeneye*
 Merganser - *Merganser*

THE TUFTED DUCK.

Fuligula cristata (Leach).

PLATE 49.

During late years this handsome little duck has been increasing in numbers as a resident in all parts of the British Islands, so much so that it has been recorded as nesting over the greater portion of the United Kingdom. It is abundant in Scotland, being especially numerous on Loch Leven, and breeding plentifully every year on the islands of that historic lake. It is found over a great part of Europe, breeding in the northern districts of the Continent, speaking roughly, from Lapland southwards to Central Europe, whilst in winter it visits the Mediterranean countries and Northern Africa. It also inhabits a great part of Asia, and during the cold season migrates to India as well as to the islands of the Pacific.

The nest, sheltered by some bush or tuft of rushes, is built of dead grasses with a lining of down, and contains from eight to ten or even more eggs of a greenish-buff colour.

According to Mr. Whitaker, as quoted in Howard Saunders' *Manual*, the note of this species sounds as "*currugh, currugh*, uttered gutturally."

The food, partly vegetable, partly animal, consists chiefly of aquatic plants, insects, molluscs, tadpoles, &c., obtained by diving, in which art the Tufted Duck shows great proficiency.

THE SCAUP-DUCK.

Fuligula marila (Linnæus).

PLATE 49.

This marine species, common on many parts of our coasts and estuaries in winter, and much less often seen on inland waters, breeds throughout the greater part of the circumpolar regions of Europe, Asia, and America, and also within recent years a few nests have been identified in the north of Scotland, as well as in the Orkneys and Outer Hebrides.

The first authentic nest of this species found in the British Islands was that discovered by Mr. Heatley Noble on an island in a Sutherlandshire loch (*Ibis*, 1899, and the *Annals of Scottish Natural History*, 1899).

During the breeding season the Scaup frequents fresh-water lakes and rivers, and builds its nest among rushes or in rough grassy cover near water, and lays from six to ten or eleven eggs of a pale greenish-grey colour.

This duck is an expert diver, and obtains its food on the submerged mussel-beds or tangle-covered reefs, and in the summer months, when away from salt-water on its nesting ground, eats seeds of aquatic plants, small fishes, and insects. It is very gregarious in its habits, and utters a harsh, discordant croak.

THE GOLDEN-EYE.

Clangula glaucion (Linnæus).

PLATE 49.

The Golden-Eye, another of our autumn and winter visitants, is at that time fairly common on the salt-water estuaries, the brackish water of tidal rivers, and on many inland lakes and streams.

The summer home of the Golden-Eye is in Northern Europe, North Asia, and North America, but in the last-mentioned country a larger race represents our bird.

When the breeding season is over the birds move southwards to more temperate regions, and then visit other parts of Europe, North Africa, China, Japan, and India, whilst the American form winters in the southern regions of the New World.

The Golden-Eye usually occupies for its nesting site a hollow tree, and in Lapland logs are purposely hollowed out by the natives as breeding boxes. The eggs, varying in number from ten to a dozen, are of a bright, clear green colour.

The food is chiefly composed of the larvæ of water-insects, secured by the bird from under the stones when diving, also of mussels, tadpoles, and fishes.

Millais, in his *British Diving Ducks*, vol. i. pp. 90-91, has given us an interesting account of the Golden-Eye's methods when obtaining food. "In clear water it is easy to note the powerful strokes of the legs of these ducks, which seem to beat with great rapidity under water and much power. The stroke is more or less parallel to the wings, the head is held out straight in front. I have watched for hours the male Golden-Eye that lived for three years on the island below Perth bridge, and used to find his food at the bottom of the river in some 8 to 10 feet of water. In summer this water was as clear as crystal, and from the bridge above the observer could note every movement on the part of the bird. It always proceeded to a depth of 8 to 10 feet of water, and began to dive. On reaching the bottom it at once commenced to turn the stones over with the bill, and from under these, various water-insects were found or caught as they attempted to escape. Sometimes it would find a small batch of young fresh-water mussels, and these it would devour very quickly one after the other, like a duck taking grain out

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of a pan. It never stayed under water for more than a minute, even when finding food abundant in one spot, but came up, rested a moment or two on the surface, and dived again. All food was swallowed where it was found, and small pebbles and fairly large stones were pushed over in the search."

The Golden-Eye is known to fowlers in some places as "Rattlewing," from the curious whistling noise made by the wings of the bird in flight; whilst the females and immature males, under the name of "Morillon," were formerly, and in some cases even now, considered to be a different species.

THE BUFFEL-HEADED DUCK.

Clangula albeola (Linnæus).

PLATE 49.

I can find only two reliable records of this small American duck in Great Britain, the first shot near Yarmouth about 1830, and at present in the Norwich Museum, and another, now in the possession of Mr. J. Whitaker, of Rainworth Lodge, Notts, killed at Bridlington, Yorkshire, in the winter of 1864-65.

Some other specimens recorded are said not to be authentic. The Buffel-headed Duck breeds in the northern parts of the United States of America and in the Dominion of Canada, migrating in winter to the more southern parts of that Continent as far as California, Mexico, and Florida, as well as to the West Indies and the Bermudas.

Like the Golden-Eye, this species nests in holes in trees, often at some height from the ground, and lays from eight to ten eggs, which are buffish-white in colour.

In summer it lives on plants, worms, snails, &c., and when on salt water in winter, it eats shell-fish and other marine creatures.

It is usually a silent bird, merely uttering a low croak, and is known in America under the names of "Butter-ball," "Spirit Duck," and "Conjuror," the two last having been applied to this duck owing to the rapidity with which it disappears when diving.

THE LONG-TAILED DUCK.

Harelda glacialis (Linnæus).

PLATE 49.

This beautiful species is a winter visitant to the British Islands, arriving in considerable numbers in October and usually leaving in March. It is more abundant in the waters of the northern and western islands and along the coasts of Scotland and east coast of England than elsewhere, and is said to have nested in the Orkneys and Shetlands, which statement seems open to doubt.

The Long-tailed Duck breeds on the tundras of Northern Europe, Asia, and America, chiefly within the Arctic Circle, retreating in winter to more temperate climates.

The nest, usually hidden away among dwarf willows, rough grass, or other vegetation, and placed at various distances from fresh water, sometimes being close to it, at others at some little distance, contains from six to eight or even nine eggs, of a dull buff colour slightly tinged with greyish-green.

When feeding, according to Millais (*British Diving Ducks*), "Long-tailed Ducks seem capable of diving to a greater depth than most of the genus except the Eider, the Scaup, and the Velvet-Scoter; usually their feeding grounds are in ten to thirty feet of water, and they seem able to remain below in considerable currents. In diving they use the feet only, and turn and twist to avoid sea-weed with great skill."

Their food when off our coasts in winter consists principally of mussels and other shell-fish, as well as small crustaceans, and in summer the leaves and seeds of water-plants and also insects are eaten.

The cry of the drake is a loud and musical call, rendered by some authors as "calloo," but, according to Millais, "it is always the same, Ka-Ka-Coal-and Candle-Light," and from its notes, various local names have been given to this bird, supposed to represent its voice.

The Long-tailed Duck is restless and active, and appears to be quite at home even among fairly heavy seas.

The winter plumage of this species, as shown on Plate 49, differs very much in colour from that assumed during the breeding season, which in the male is as follows: On the face a patch of brownish-grey, extending from the bill to the ear-

THE LONG-TAILED DUCK

coverts, the part immediately around the eye being almost white; the rest of the head, neck, and breast are brownish-black, the scapulars and upper parts rufous with black centres to the feathers, and the rest of the plumage much the same as in winter.

The female in summer has the head and neck dark brown, with a light patch on the face corresponding in some degree to that in the male, the lower part of the breast brown and grey, and is elsewhere generally more rufous than in winter.

THE HARLEQUIN DUCK.

Cosmonetta histrionica (Linnæus).

PLATE 50.

The Harlequin Duck is an extremely rare visitor to the British Islands, and although most of the records of its occurrence are open to doubt, the male picked up on the shore at Filey, Yorkshire, in the autumn of 1862, now in the collection of Mr. J. Whitaker of Rainworth, Notts, and the two males obtained out of a party of three birds near the Farne Islands, Northumberland, in December 1886, in the possession of Mr. R. W. Chase and the Rev. Julius Tuck, are well authenticated. In *British Diving Ducks*, Millais has added another record which he considers above suspicion, viz. "an adult male killed near the Farnes in December 1882 by one Cuthbertson, and now in the possession of Lord William Percy at Alnwick Castle."

This very conspicuous duck inhabits Iceland, where it is not uncommon as a breeding species, and is also found in eastern Siberia, Greenland, and over a great part of North America, being abundant in many places.

The nest is usually placed in holes, or under the cover of vegetation on the banks of some rapid stream, or on an island surrounded by rushing water, and contains from five to ten cream-coloured eggs, the normal number, according to Howard Saunders, being seven.

In winter the Harlequin Duck takes to the sea; seeking its food, which consists chiefly of shell-fish, crustaceans, and other marine creatures, by diving to the bottom, undeterred by the fear of breakers or rapid currents.



Harlequin Duck (1891)

Eider Duck (1891)

King Eider (1891)

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THE EIDER DUCK.

Somateria mollissima (Linnæus).

PLATE 50.

This truly marine duck, famed on account of the down provided by the female, with which she surrounds her eggs, is in England only known as a breeding species on the Northumberland coast, the Farne Islands, where it is known as St. Cuthbert's Duck, being its chief stronghold. In winter it appears off-shore in other parts of England, but only in small numbers in the south and west. In Scotland the Eider is much more plentiful, nesting freely along the coasts, and especially in the Orkneys, Shetlands, and Outer and Inner Hebrides, whilst in winter many arrive from the Continent of Europe. It is recorded as having bred for the first time in Ireland in 1912.

The Eider is widely spread over Northern Europe, in localities which suit its sea-loving habits, inhabiting also the islands of the Arctic Ocean, Iceland, and the Faeroes, but in winter many move southwards to more temperate regions. It breeds in northern Siberia, as far east as the Yenisei, other forms of the same species being found in Greenland, eastern and western North America, and North-east Asia.

The nest, composed of pieces of dead grass, sea-weed, or heather, is usually situated near the water in some depression in the ground among stones, or in a clump of marine vegetation, the warm lining of down, plucked from the breast and abdomen of the female, being added about the time the first clutch of eggs is completed. These, generally four or five in number, vary somewhat in colour, but are usually of a pale olive.

According to Millais (*British Diving Ducks*), Eiders in swimming and diving "are surpassed by no other species of diving ducks, being capable of holding their own in the roughest water, and diving to a great depth for food. It has been proved that they can take their food regularly at a depth of 25 to 35 feet and more without inconvenience."

The common salt-water mussel appears to be their favourite food, but various other shell-fish and crustacea are sought after and obtained on the bottom of the sea. In Scandinavian countries the bird is strictly protected on account of its valuable down, which is superior to that of other ducks.

The male Eider takes a long time before coming to maturity, the rich black and creamy-white plumage not being fully assumed until the third year.

THE KING-EIDER.

Somateria spectabilis (Linnæus).

PLATE 50.

This circumpolar species, whose breeding range extends through the arctic regions of Europe, Asia, and America to Greenland, visits warmer seas in winter, when it may be found off the coasts of Scandinavia and even in more southern parts of Europe.

The King-Eider is a rather rare visitor to the British Islands, four having been obtained and two others seen on the east coast of England, and a fair number taken or observed off the eastern shores of Scotland and in the seas surrounding the Orkneys and Shetlands, where its visits appears to be more frequent than elsewhere. Some five specimens have been recorded in Ireland.

The nest resembles that of our Common Eider, but, according to Millais, the down from the female is of a darker colour. The eggs, generally from four to five in number, do not differ from those of its congener in colour. Like our Eider it also obtains its food at some depth under water, feeding chiefly on molluscs and crustaceans.

The late H. E. Dresser, in pointing out the difference between the females of this species and the other, says (*A Manual of Palearctic Birds*, p. 633), "The female differs from that of *S. mollissima* in being smaller, darker, and in having the central line of feathers on the upper mandible extending quite down to the nostrils."

STELLER'S EIDER.

Somateria stelleri (Pallas).

PLATE 51.

Steller's Eider, another arctic species inhabiting the coasts of northern Siberia and North America, wanders southwards in winter, when it often visits the shores of Norway and the waters of the Baltic. It is a very rare visitant to the British Islands, only two specimens having been recorded; the first, an almost adult male, obtained at Caistor, Norfolk, in February 1830, and a younger bird of the same sex at Filey Brigg, in Yorkshire, in August 1845.

This beautifully marked little Eider takes after the other members of the genus in its habits.

According to Von Middendorff, who found these ducks breeding in some numbers on the Taimyr River in Siberia, as quoted by Dresser (*Birds of Europe*), "this bird places its nest in the moss on the flat tundras; it is cup-shaped and well lined with down, the male remains in the neighbourhood of the sitting female, who leaves the nest unwillingly, uttering a cry resembling that of our common Teal, but harsher."

It feeds chiefly on molluscs and crustacea, obtained by diving in deep water.

THE COMMON SCOTER.

Ædemia nigra, Linnæus.

PLATE 51.

The Common or Black Scoter is an extremely abundant autumnal visitant to the coasts of the British Islands. During that season and in winter enormous flocks may be seen in the English Channel and the North Sea, and in the summer months in much smaller numbers. It is not uncommon as a breeding species in the northern parts of Scotland, especially in Caithness and Sutherland, according to Mr. Heatley Noble, as quoted in Millais' *Diving Ducks*, being much more plentiful than generally supposed. It has also nested of late years on one of the Irish loughs.

The Common Scoter breeds chiefly in Northern Europe and Siberia, ranging in the latter country as far east as the Taimyr Peninsula, and in winter its visits extend as far south as the Mediterranean and North Africa.

The nest, composed of dead grasses, moss, &c., and warmly lined with down, is usually placed among heather, dwarf willows, or other cover—often on islands or by the side of a fresh-water loch—and contains from six to nine cream-coloured eggs.

It feeds mainly on shell-fish, the common mussel providing its chief supply when at sea, but crustaceans, insects, and worms are also eaten, as well as roots of aquatic plants.

According to Lt.-Commander Millais (*British Diving Ducks*, vol. ii. p. 59), "in winter the cry of both adult male and female and immature is a harsh grating call which is so common amongst other sea-ducks, but in spring the adult male utters a somewhat musical bell-like call, which is very difficult to render in words." The same author says: "With its powerful feet and legs the Common Scoter dives frequently when on feed, generally reappearing almost on the same spot; and where they are not constantly disturbed, they are seldom seen flying, but drift lazily about in great battalions when not on feed."

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THE VELVET-SCOTER.

Ædemia fusca, Linnæus.

PLATE 51.

This sea-duck visits us in autumn in fair numbers, but it is not nearly so plentiful as the Common Scoter, and is more often seen off the eastern and southern coasts of Great Britain than in our western waters. It appears to be most numerous among the Orkneys, but never breeds in the British Islands, although a few odd birds have been seen occasionally on the east coast of Scotland during the summer months. The summer home of the Velvet-Scoter is in Northern Europe and western Siberia, where it frequents fresh-water lakes, which it leaves as winter approaches for the seas of Western Europe, and also the Black and Caspian Seas.

The nest, thickly padded with down, is generally placed in some hollow on dry ground, under the shelter of willow-scrub or bushes, sometimes, according to Seebohm, "on the tundras at some distance from water." The eggs, varying from eight to ten in number, are of a creamy-white colour.

The Velvet-Scoter, besides being more of a deep-sea diver, is able to withstand rougher and more exposed waters than the common species, and goes down to a considerable depth after its food of mussels and other marine creatures. It may easily be recognised by the white eye-spot and band of the same colour on the wings.

THE SURF-SCOTER.

Edemia perspicillata, Linnæus.

PLATE 51.

A rare winter visitor to the British Islands, this American species has been more frequently obtained and seen off our western coasts than elsewhere, except in the Orkneys, where, according to Millais, no less than six specimens have been obtained. The Surf-Scoter inhabits North America, breeding in the arctic portions of that region, and migrating in winter as far south as the coasts of Lower California and Florida, in which season it also occasionally visits the Bermudas and Jamaica.

The late H. E. Dresser, in his *Birds of Europe*, quoting a communication received by him from Dr. Brewer, regarding the breeding haunts of this species, says, "The nest was snugly placed amid the tall leaves of a bunch of grass, and raised fully four inches above its roots. It was entirely composed of withered and rotted weeds, the former being circularly arranged over the latter, producing a well-rounded cavity six inches in diameter by two and a half in depth. The borders of this inner cup were lined with the down of the bird, in the same manner as the Eider Duck's nest; and in it lay five eggs, the smallest number I have ever found in any duck's nest, . . . of a uniform pale yellowish or cream-colour." Howard Saunders gives the number of eggs as from six to eight.

The food, like that of the other members of the genus, consists chiefly of shellfish, obtained by diving to a considerable depth, the bird being quite at its ease among the roughest water.

THE GOOSANDER.

Mergus merganser, Linnæus.

PLATE 52.

Until some forty-five years ago, the accounts of the breeding of this very beautiful duck in Great Britain seem open to doubt, but Macgillivray believed that it nested near Loch Maddy, North Uist, in 1840. It is now known however to breed in various parts of northern Scotland, as well as in Perthshire and Argyll. Elsewhere in the British Islands the Goosander is only known as a winter visitor, and although frequenting estuaries, seems much more at home on rather large and clear, rapid rivers. During summer it inhabits Iceland and Northern Europe southwards to the lakes of Switzerland, many of the birds moving still farther south in the cold season. In Asia it ranges eastwards to Kamchatka and southwards to China and Japan. In Northern Europe the Goosander breeds in hollow trees or in nesting-boxes put up for the purpose by the peasants, but in Scotland the nest is usually placed in holes among rocks or peat and near running water. The eggs, from seven to twelve or thirteen in number, are creamy-white in colour.

The food of the Goosander consists almost entirely of small fishes, for the capture of which the saw-like bill, armed with small sharp projections, is beautifully adapted.

The usual cry of this species is a harsh guttural note.

Few of our wildfowl approach it in splendour of colouring, and I can think of no more beautiful glimpse of bird life than one I enjoyed on a winter's day many years ago when walking by the Tweed near Coldstream, of a flock sunning themselves on the ice-bound margin of the river.

Lt.-Commander J. G. Millais has kindly furnished me with the following notes on the Goosander: "The only known specimen of this bird in eclipse plumage (killed in Finmark) was figured in my work on the *Natural History of British Diving Ducks*. In September 1915 I killed four specimens in full eclipse in North-eastern Europe. At this season they are the most unapproachable of all water birds. As soon as the young are hatched, the adult males leave the breeding ground and make their way to the sea in parties in July, and then choose places on the coast where it is almost impossible to approach them without being observed. I have often seen them rise at a distance of half a mile. Drakes of all species are shy when in the eclipse dress, but Goosanders are the shyest of all birds, not excepting the Wild Geese."

THE RED-BREASTED MERGANSER.

Mergus serrator, Linnæus.

PLATE 52.

The Red-breasted Merganser is a winter visitor to the coasts of England, whilst in Scotland and in Ireland it is a resident, breeding on many inland sheets of water as well as by the sea. It is quite a common bird in suitable localities in north-western Scotland as well as in other parts, and I have often seen pairs frequenting Loch Maree in Ross-shire. It inhabits the northern regions of Europe, Asia, and America, ranging more towards the southern parts of those countries in winter.

The nest, situated among heather or some other thick vegetation, and often concealed in holes among rocks or in river banks, contains from five to ten eggs, in colour yellowish-buff tinged with green. The Red-breasted Merganser is an expert diver, and feeds on different kinds of small fishes, the sand-eel being a favourite when on salt water.

The harsh guttural cry of this species resembles that of the Goosander, but it is usually a silent bird.

Macgillivray says: "This bird flies with rapidity, in the manner of a duck, its wings whistling as it speeds along. It is very shy, vigilant, and active, so that the only good chance one has of shooting it on the water is either when it is floating with its head below, or just as it emerges after diving. Its flesh, however, is not in request, being tough, oily, and with what is called a fishy flavour. On ordinary occasions it rises from the water at a very low angle, striking the surface with its feet and wings, but it is able also to spring up directly either from the ground or from the water."

Like all the members of the genus, the Red-breasted Merganser has a toothed bill, and is hence often called "Saw-bill" by wild fowlers.



Red-breasted Merganser, Jay
 Goldeneye, Jay

Hooded Merganser, Jay
 3

THE SMEW.

Mergus arbellus, Linnæus.

PLATE 52.

The Smew is a rather late winter visitor to our islands, most commonly found on the eastern coasts of Great Britain, and annually visiting the southern coast of England, and, according to Millais, "it is not uncommon on the Inner Hebrides, but rare on the Outer Hebrides, Orkneys and Shetlands."

During the breeding season the Smew inhabits Northern Europe and Asia, ranging in winter as far south as the Mediterranean, also to India, China, and Japan.

The nidification of this species was long a mystery, until Wooley obtained the first eggs through one of his collectors, in Swedish Lapland, in June 1857. The cream-coloured eggs, which closely resemble the Wigeon's, generally vary in number from six to nine.

During its stay with us in winter the Smew usually haunts the salt-water estuaries, occasionally coming inland to sheets of fresh water and rivers, the beautiful full-plumaged adult males being less frequently seen, and much more difficult to approach than the less wary females and immature birds.

The food consists chiefly of small fishes, especially sand-eels when on the sea, which the bird has no difficulty in obtaining, as it is an accomplished diver.

As a rule, it is a silent bird.

THE HOODED MERGANSER.

Mergus cucullatus, Linnæus.

PLATE 52.

This North American species is a very rare visitor to the British Islands, only four well-authenticated examples having occurred on our coasts. The first of these was obtained in the Menai Straits, North Wales, in the winter of 1830-31, a pair were shot by Sir R. Payne-Gallwey in Cork Harbour in December 1878, who also obtained a female on the north coast of Kerry in January 1881. Other specimens are said to have occurred in Ireland as well as in England.

The Hooded Merganser is plentifully distributed in summer over many parts of North America, ranging in winter as far south as Mexico, Cuba, and the West Indies.

Millais, in describing the habits of this species in *British Diving Ducks*, says: "Unlike the Goosander and Red-breasted Merganser, which delight in rushing streams and sea estuaries and bays, the Hooded Merganser loves the quiet lakes and pools of forest country. I have found it in British Columbia and Ontario in much the same habitat as the Buffle-headed Duck. They are often found on the same lakes as the Dusky and Wood Ducks, although not actually consorting with those species. They seem to be altogether a more delicate form of Merganser than the other species, and avoid rough winds and exposed situations of all kinds, spending the day in exploring the depths of some quiet pool for fish and water-insects."

This species breeds in hollow trees, and lays from five to eight pale creamy-white eggs.

Order COLUMBÆ.

FAMILY COLUMBIDÆ.

THE WOOD-PIGEON.

Columba palumbus, Linnæus.

PLATE 53.

The Wood-Pigeon or Ring-Dove, known in the northern parts of our country as Cushat, is an abundant species throughout the British Islands and over a great part of the Continent of Europe, ranging, according to the B.O.U. "List of British Birds" (1915), to North-east Persia and North-west Africa.

The nest, containing the two white eggs, is lightly constructed of sticks, and usually placed in trees, conifers being more often favoured than others, though evergreens, including ivy on buildings, are often chosen.

The well-known notes of the Wood-Pigeon, which produce a pleasing reverberation of sound, especially when heard in woods of tall pines, are familiar to everyone, but what I take to be the true love-song of the male is entirely different, being much softer in tone and more blended. I was not aware of this until I became possessed of the very tame and fearless bird from which the drawing on Plate 53 was taken. This bird I kept for some years in an aviary, and he always assumed the crouching attitude depicted when uttering these love-notes, while the pupils of the eyes contracted until sometimes they were mere specks. At other times he would emit the ordinary Ring-Dove notes, but never, as far as I could see, with his body held in this characteristic position. I believe that this constitutes "the display" of the male when courting, but, owing to their shyness, I have never had an opportunity of witnessing it in a wild bird. My pigeon seemed to prefer the company of human beings to that of his own kind, and often began to coo when closely approached, and would allow himself to be handled.

In autumn vast flocks of this species come over to us from the Continent of Europe, particularly when there is a good "beech-mast year," the seeds of the beech, as well as acorns, holly berries, and grain of all kinds, being chiefly sought after as food. It also eats turnip-tops, clover, and other green-stuffs.

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The migrants which arrive in autumn from abroad are said to be "smaller, darker in colour, and somewhat differing in the manner of flight from our home-bred birds" (Lord Lilford).

During the breeding season the male bird may be seen taking a short flight, at the same time alternately rising and descending, and occasionally producing a sharp clap by the striking together of its wings, which has been well described by Macgillivray. At this time they lose much of their usual shyness, and come to the neighbourhood of gardens and shrubberies, where the nest is often built. When on the ground Wood-Pigeons walk in rather a slow and heavy manner, quite unlike the much smarter action of the Stock-Dove when feeding, as I have noticed when the two species are together. The white ring, characteristic of both sexes when adult, is absent in the young.



Rock Dove

Rock Dove

Rock Dove

Rock Dove

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THE STOCK-DOVE.

Columba œnas, Linnæus.

PLATE 53.

Much smaller than the Wood-Pigeon, and said to take its name from its habits of breeding in the "stocks" of trees, this species, though plentiful in many parts of the British Islands, is not nearly so common as its larger relation just described. Within recent years, however, the Stock-Dove has greatly extended its breeding range, and now nests as far north in Scotland as Sutherlandshire. It is widely distributed over Europe and Western Asia to Turkestan.

Besides occupying hollow trees as breeding places, the Stock-Dove makes its nest in rabbit-burrows or under the shelter of thick furze-bushes, and often in cliffs. When breeding in tree-holes it appears usually to lay its eggs on the bare wood, but otherwise a slight nest of twigs and rootlets is built. The two eggs are of a delicate creamy-white colour.

The voice of the Stock-Dove differs from that of the Wood-Pigeon, consisting of a rapid succession of less distinct and agreeable notes.

In their habits the two species have much in common. According to Lord Lilford (*Birds of Northamptonshire and Neighbourhood*), the Stock-Dove appears to be more addicted to green food than its congener, but it is also very fond of beech-mast. It is quicker in its motions, turning and twisting in the air with great rapidity.

It is at all times a rather shy and wary bird, and is not easily approached, especially when feeding in the open.

THE ROCK-DOVE.

Columba livia, J. F. Gmelin.

PLATE 53.

This species, which appears to be the origin of all our domestic races of Pigeon, though breeding in small numbers on some of the rocky parts of the coasts of England and Wales, is not abundant, and no doubt a good many of these individuals are descended from the birds inhabiting our dove-cots. Along the Scottish coasts, and on the northern and western islands, where high and broken cliffs tower above the ocean, it is a common bird, haunting the rocky caverns and fissures overhanging the sea. Within these recesses the rather scanty nest, composed of bents or pieces of other plants, is built, in which the female deposits her two white eggs.

The food consists of seeds of various kinds, especially grain when it can be obtained, but those of weeds are also eaten.

The notes closely resemble the cooing of our domestic Pigeon.

Macgillivray, who has given the best description I can find of the habits of this species, says: "When searching for food, they walk about with great celerity, moving the head backwards and forwards at each step, the tail sloping towards the ground, and the tips of the wings tucked up over it. In windy weather they usually move in a direction more or less opposite to the blast, and keep their body nearer to the ground than when it is calm, the whole flock going together. When startled they rise suddenly, and by striking the ground with their wings produce a crackling noise. When at full speed they fly with great celerity, the air whistling against their pinions. Their flight is very similar to that of the Ringed and Golden Plovers, birds which in form approach very nearly to the Pigeons, as may be seen more especially on comparing their skeletons; and as this affinity has not been observed by any other person, I would direct the attention of ornithologists to it."

The bird represented in the plate was drawn from a specimen obtained on the coast of Ross-shire.

THE TURTLE-DOVE.

Turtur communis, Selby.

PLATE 53.

This beautiful little dove, the smallest of our British species, is a common summer visitant to England, being more plentiful in the southern, eastern, and midland counties than in other parts. It is rare in Scotland, where it has never been known to breed, and although also scarce in Ireland, it is said to have nested there.

The Turtle-Dove is found during summer over the greater part of Europe and also in Western Asia, whilst in winter it retires to Africa. It arrives in England about the end of April or early in May, where its presence is soon revealed by its pleasing though rather monotonous love-notes.

The food consists of various seeds, including those of weeds, as well as the leaves of plants.

The nest, which is nothing more than a lightly constructed platform of twigs, containing the two white eggs, is built in tall hedges or on trees. In my own neighbourhood, where the bird is common, I have more often found it in young larches than in others, but have seen it among old furze-bushes overgrown with brambles.

When the female is sitting, her mate often perches not far off on the bare bough of some favourite tree. At times he will leave his perch and fly upwards till a certain height is reached, when, stretching out his wings and sailing downwards with a gliding motion, he again alights. On ordinary occasions the flight is very swift and direct.

An example of the Rufous Turtle-Dove, *Turtur orientalis*, an immature bird, was obtained near Scarborough, Yorkshire, in October 1889. It inhabits south-eastern Siberia, eastwards to Korea and Japan, and southwards to China and India.

This species is larger and darker than our bird, and has the light edges of the black feathers on the collar of an ashy-blue instead of white.

Several examples of the American Passenger Pigeon, *Ectopistes migratorius*, have been obtained in Great Britain, but these, no doubt, had escaped from captivity. I may mention here that this species is now quite extinct, the last of her race, a very old bird, having died recently in captivity.

Order PTEROCLETES.

FAMILY PTEROCLIDÆ.

PALLAS'S SAND-GROUSE.

Syrrhaptes paradoxus, Pallas.

PLATE 53.

Periodical invasions of the British Islands by this beautiful desert species from the steppes of Central Asia have occurred from time to time, the greatest irruptions being those of the summers of 1863 and 1888, when vast numbers of the birds visited our eastern shores, and soon spread over the greater part of the country, many reaching Ireland, the Orkneys, and even the remote Hebrides. It was fondly hoped that the birds might remain and breed, but they are only known to have done so among the sandhills of the Moray Firth and in Yorkshire, a young bird having been found in the first-mentioned district in the summer of 1888, and another in the following year, whilst eggs were discovered in Yorkshire in 1888. The birds, however, all soon disappeared, a good many having been shot, and others no doubt died, owing to the unaccustomed climate.

The nest is a mere hollow in the sand, and contains three eggs, in colour a dull buff marked with purplish-brown.

The food consists chiefly of the seeds of various plants.

The home of Pallas's Sand-Grouse is among the deserts of Central Asia; it is difficult to account for the periodical migrations of such large numbers, unless it be due to overcrowding. This is no doubt the species mentioned by Marco Polo, under the name *Barguerlac*, which he met with on his travels through this wild country in the thirteenth century.

According to Millais, who had opportunities of observing the birds during the visitation of 1888, "the flight is very swift, direct, and like that of the Golden Plover. When on the wing they constantly cry "Kit-id-dee."



A. Thorburn. 1851.

Capercaillie 1851

Order GALLINÆ.

FAMILY TETRAONIDÆ.

THE CAPERCAILLIE.

Tetrao urogallus, Linnæus.

PLATE 54.

In former times the Capercaillie or Wood-Grouse inhabited to some extent the pine-forests of England, as is proved by the discovery of its bones among Roman remains and in caves in Yorkshire. According to Pennant, it also occurred in Wales.

This fine bird lingered to a much later date in Scotland and Ireland, and is supposed to have become extinct in the two last-mentioned countries during the last half of the eighteenth century, perhaps sometime between 1760 and 1770.

In the autumn of 1837 and in the following spring it was successfully re-introduced to Scotland by Lord Breadalbane, who imported birds from Sweden and established them at Taymouth, whence they have spread far and wide over the country.

The Capercaillie is widely distributed over Europe, where there are tracts of pine-forest large enough to meet its requirements, from Scandinavia and Russia, to the mountain ranges of northern Spain and Italy, as well as the Carpathians. In Asia it ranges eastwards as far as Lake Baikal.

The nest, a mere hollow in the ground among trees, and lined with bits of grass and pine-needles, usually contains from six to ten eggs, of a pale brownish-buff colour blotched with reddish-brown.

The food consists of various wild berries, buds and shoots of trees, pine-needles, and also insects.

The remarkable display of the cock Capercaillie in spring, when the bird, perched on the bare bough of some pine, utters his weird love-song, has been graphically described from personal observation by Millais in his *Natural History of British Game Birds* (p. 10) as follows: "When in the act of display the male stretches out the neck, spreads the tail and lowers the wings, and utters a note something like the words 'Klick-kleck,' repeated at intervals. It then turns the

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head upwards and backwards, uttering a variety of extraordinary noises or squalls, more like two cats fighting at a distance than anything else. During the performance of the culmination of his display the bird seems to be thrown into a kind of ecstasy of excitement, and to be quite oblivious to all sounds or movements in its immediate neighbourhood."

The Capercaillie is polygamous, and fierce battles often take place between rival males ; according to the authority just quoted, these fights are sometimes carried to such a length as to cause the death of one of the combatants.

THE BLACK GROUSE.

Tetrao tetrix, Linnæus.

PLATE 55.

Commonly known as Black-game when both sexes are included, and respectively as Blackcock and Greyhen, this species is still fairly plentiful in the north of England, becoming less frequent in some of the midland counties, and though still found in Wales, Somersetshire, and North Devon, exists only in small and diminishing numbers in other parts of south-western England. Formerly it inhabited Kent, Hampshire, Surrey, and Sussex, but in those counties it is now quite extinct. The Black Grouse is widely distributed over Scotland, being a common species in many parts, but it is not indigenous in Ireland. It is well known on the Continent of Europe, and ranges eastwards into Siberia.

In March and April, and sometime onwards until summer, the males assemble soon after daybreak on some favourite open spot, when they perform their striking love-display, known as the *lek*, and engage in battle—never, as far as I have seen, with any very serious results—for possession of the females. I have often watched these meetings on grassy “knowes” by the Helmsdale in Sutherland, where the sketches were made for the birds in the picture, which show the Blackcock’s attitude when courting. He produces at the time a succession of soft notes, which have been described as “whirring” or “bubbling,” and these may be heard at times during the day; when sparring with an antagonist, the cocks often emit a rather harsh cry.

The nest is merely some small cavity in the ground, with a scanty lining of dry herbage, and contains from six to ten eggs, in ground colour yellowish-white spotted and marked with brownish-red.

Black-game feed chiefly on various wild fruits, such as rowan berries, blackberries, heps and haws, as well as on buds of the birch and other trees, and, when young, more or less on insects.

THE RED GROUSE.

Lagopus scoticus, Latham.

PLATE 55.

Confined entirely to our islands, this truly British species is plentiful on ground suited to its habits in many parts of England and Wales, being more numerous in the northern counties, whilst it abounds on the hill-sides and heathery moors of Scotland, from the sea-coast up to the Ptarmigan ground on the mountains. In Ireland it is less in evidence, chiefly owing to the want of protection.

The nest, composed of small sticks, grass, or moss, is placed in a slight hollow under branching heather or tufts of grass, and usually holds from seven to twelve, or occasionally more, eggs, creamy-white in ground-colour blotched with rich reddish-brown.

The staple food of the Red Grouse on most moors consists of the green shoots of the common heather or ling, the bell-heather and cross-leaved heath, besides the fruit and leaves of other plants, and the seeds of grass and rushes. The out-lying oat-fields are a great temptation to the birds in autumn, when they visit the stooks in large numbers, and I have found that the best means of studying the grouse at close quarters is to conceal oneself in a hiding-place among the sheaves, when they will approach within a few feet, or even alight on the straw above the watcher's head. I have noticed on one of these occasions how terrified the birds become on the approach of a Peregrine Falcon, when they will crouch low down among the stubble, well aware of the danger of any attempt to escape by flight, and of the Falcon's dislike to attack her quarry on the ground.

In winter, when the higher feeding grounds are often covered with frozen snow, which cuts off their food supply, the birds suffer accordingly, and migrate in large packs from the higher moors to less exposed situations.

The loud, cheery call of the cock Grouse, often heard at dawn as the bird stands on a stone or grassy hillock, beginning with what may be syllabled as *kok, kok, kok*, and ending with *gobak, gobak, gobak*, is a characteristic sound on the moors in early spring.

Apart from man, the Red Grouse has many enemies, the Hooded Crows causing great destruction to their eggs and young, while the Peregrine and Golden Eagle also take their toll of the older or sickly birds, but the depredations of the nobler birds of prey are no doubt beneficial in some measure, as the well-known and much discussed Grouse disease is probably due to overcrowding.



Red Grouse. 1881
Black Grouse. 1881

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THE PTARMIGAN.

Lagopus mutus (Montin).

PLATE 56.

The Ptarmigan inhabits the higher mountain tops of the Scottish Highlands, being plentiful on many of their stony summits at an altitude above two thousand feet, ranging as far south as Ben Lomond, and is found also in small numbers on some of the Western Islands, viz. in Mull, Islay, Jura, Skye, and also in Rum, in which island some are said still to linger, after having been re-introduced some years ago. According to the late Robert Service (*Zoologist*, 1887, pp. 81-89), a few still existed on some of the Dumfriesshire and Galloway hills until about 1822, when the last survivors were obtained near Sanquhar, and although re-introduced by the Duke of Buccleuch, failed to establish themselves. Tales have been handed down of its occurrence on the Cumberland and Westmorland fells in olden times, but it never inhabited Ireland.

The Ptarmigan is numerous on the high fjelds of Scandinavia, ranging southwards to the mountains of Central and Southern Europe, and eastwards as far, or perhaps farther, than the Ural Mountains, while closely allied forms are found in Iceland, Greenland, North America, and Northern Asia.

The female scrapes a hollow in the ground to serve as a nest, seldom lining it with more than a few bents and some of her own feathers, and here she lays her eight or nine eggs. These have a ground colour of yellowish-white or reddish-buff blotched with rich brown.

The Ptarmigan's food consists of the young shoots of heather and various mountain plants, as well as berries. Macgillivray has shown that the birds pick up numerous particles of quartz, by which means the food is ground and pounded in the gizzard.

In autumn, after a long tiring climb to the Ptarmigan ground, usually not much under some two thousand feet above sea-level, the only intimation of the presence of a covey may be the low jarring notes of the old cock bird in charge, heard close by, but very difficult to locate, and so closely does the plumage of these hardy mountaineers match the grey stones and lichen of their surroundings, that often the flash of their snowy pinions as they rise is the first glimpse obtained of them,

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and, when once started, few birds can disappear more quickly than Ptarmigan, as they wheel over the brink of a precipice and dive into space.

They are much affected by weather conditions, being more easily approached on still sunny days, when they will often run before the intruder without taking wing ; on the other hand, when a change to wind and rain takes place, they become wild and suspicious.

Ptarmigan seem well aware of the safety afforded by their highly protective colouring. I once observed an instance of this when watching some birds feeding on an eagle-haunted hill on the forest of Gaick ; they hurriedly crossed open patches of stunted heather and blaeberry in a rather nervous manner, but appeared quite at home when they reached the shelter of broken stones and rocky debris.

The Golden Eagle and Hill Fox are their chief enemies ; these appear to be the cause of the scarcity of this species on many hills where it was once common.

They are hardy birds, and brave extreme cold and very severe weather as long as they can get at their food on snow-slips and wind-swept stretches on mountain sides.

In the plate the lower figures represent the birds in late autumn, the more distant one showing the intermediate stage of plumage between that season and the snowy white of mid-winter.

The male may always be distinguished from the female by the black band of feathers, reaching from the bill through the eye to the ear-coverts.



A. Thorburn
1875

Lagopus lagopus (Linn.) in winter plumage.

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FAMILY PHASIANIDÆ.

THE PHEASANT.

Phasianus colchicus (Linnæus).

PLATE 57.

When and by whom the Pheasant was originally introduced into England is unknown, but it probably existed there long before it was first mentioned in a document in the reign of King Harold in A.D. 1059.

It is not heard of in Scotland until 1594, although, according to Thompson, it was common in Ireland in 1589.

About the end of the eighteenth century the Ring-necked Pheasant, *P. torquatus*, was introduced from China, and later other varieties from Asia, so that practically none of our wild birds are now pure bred.

At the present time the Common Pheasant, the wild *P. colchicus*, according to the B.O.U. "List of British Birds" (1915, p. 312), "inhabits the western parts of Transcaucasia bordering the eastern and south-eastern shores of the Black Sea. It is also found in a wild state in the northern parts of Asia Minor, Greece, south Turkey, and along the western shores of the Black Sea as far as the Balkans, and in Albania, but in those places it may have been introduced at some remote period."

In April or May the female lays her eight to twelve eggs, of a pale greenish-brown colour occasionally tinged with bluish, the nest being only a slight hollow in the soil, lined with dead leaves or pieces of herbage placed under the protection of a fallen branch, or hidden among brambles or some such cover.

The food consists of grain and various wild fruits and seeds, including blackberries, acorns, beech-mast, and others, as well as snails, insects and grubs, the young at first feeding mostly on ants and their pupæ.

The Pheasant is polygamous, and the harsh challenging crow of the cock, followed by an audible flutter of his wings, may constantly be heard in the coverts in spring, especially on fine sunny mornings, but what seems to be the true love-note, uttered by the male when near the hens, is a very soft clucking sound, delivered with head bent low as he walks with slow, dainty steps along the ground.

BRITISH BIRDS

Cock Pheasants appear to be susceptible in an extraordinary degree to any air concussions or unaccustomed sounds, which they will at once challenge.

Interesting letters were written to the *Times* and *Field* in January 1915, after Admiral Sir David Beatty's fight in the North Sea, describing how the Pheasants in Norfolk and Lincolnshire were all crowing, and how they foretold the news of battle. Night raids by Zeppelins will also thoroughly upset Pheasants, as was observed during such attacks lately.

The other species represented on Plate 57 are :

The Chinese Ring-necked Pheasant, *P. torquatus*, a native of southern China, which was first introduced to Great Britain, as already mentioned, about the close of the eighteenth century, and its blood can be traced in most of our cock birds now, even when lacking the white collar, by the lighter and bluer upper tail-coverts.

The Japanese Pheasant, *P. versicolor*, brought here about 1840, inhabits all the islands of Japan with the exception of Yezo.

According to Millais (*The Natural History of British Game Birds*), the general habits of this species "are very similar to those of the Common Pheasant. The spring crow is, however, quite distinct from the typical species or its other allied forms. It is shriller, sharper, and more strained—seemingly somewhat of an effort on the part of the bird. In the spring, at roosting time, they keep calling repeatedly almost like a Peacock."

The last species is the splendid Mongolian Pheasant, *P. mongolicus*, which was brought to England as recently as 1901, and has now established itself in our coverts. At the present time, owing to the importation of these and other varieties, the greater part, if not all, of our birds are hybrids.



Phasianus versicolor (Linn.) *Phasianus versicolor* (Linn.) *Phasianus versicolor* (Linn.)

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THE COMMON PARTRIDGE.

Perdix cinerea, Latham.

PLATE 58.

There is hardly a more popular bird in our islands than the Partridge, which is resident and widely distributed over Great Britain, and although also found in Ireland, it is said to be yearly becoming scarcer in that country. It inhabits the greater part of Europe, from Scandinavia to the Mediterranean regions, and ranges eastwards across Asia to the Altai Mountains.

The nest is a slight hollow in the ground, scratched out by the parent bird, scantily lined with dry grass, and contains from a dozen to twenty eggs, which are usually an olive-brown, but sometimes may be bluish or nearly white in colour. On examining a nest, which the young had just left, a summer or two ago, I was struck with the tidy appearance of the egg-shells, each half having been neatly fitted into the corresponding portion of the other, but whether this is always done I am unable to say.

When a pair of Partridges have once settled on a suitable piece of ground, I have found, as far as my experience goes, that they or their successors will nest there year after year, not actually on the same spot, but not far away, the most favourable conditions being a light soil and an open aspect, with sheltering banks and hedgerows, where they can dust and take their pleasure.

The food consists chiefly of grasses and other herbage, grain, and insects, especially ants and their pupæ, on which the young are principally fed.

The cheerful jarring notes of the male are a familiar country sound, heard most often in the early morning and towards sundown in spring, but also at other times of the year.

At night the covey sleeps in the open, the birds bunched closely together, lying in a circular formation, with their heads pointing outwards.

The Partridge is monogamous, the birds pairing in February, when the males fight fiercely for their chosen partners. In the female, the chestnut horse-shoe, so characteristic of the other sex, is either absent or only partly developed, and Mr. Ogilvie Grant has shown (*Field*, November 21, 1891, and April 9, 1892) that another distinction is apparent, the hen bird having the lesser and median wing-coverts and scapulars crossed with buff-coloured bars on a dark ground, these being absent in the male.

If a pair of live Partridges are studied at close quarters, it will be seen that the male has the lines of the brow more angular than the corresponding parts of the female, at least it was so in a brace I kept for some time in an aviary.

THE RED-LEGGED PARTRIDGE.

Caccabis rufa (Linnæus).

PLATE 58.

The Red-legged or French Partridge was introduced into England before the end of the eighteenth century, and the birds, first turned out in Suffolk in 1770, have spread freely over the southern and eastern counties as well as the midlands, and are now found in Yorkshire and in Wales.

This species, which is most at home on dry and sandy soils, where it obtains its food of various seeds, herbage, and insects, is a native of Southern and Western Europe.

The female scrapes a slight hollow in the soil, concealed by long grass or other vegetation, often under a furze-bush or among brushwood, and in this nest she lays from ten to eighteen eggs, of a pale buff colour spotted and marked with rust-coloured freckles.

The call of the Red-legged Partridge differs from that of the Common species, having a much less clear and ringing sound. It has been syllabled by Howard Saunders in his *Manual of British Birds* as *chuk, chuk, chukar*.

Unlike our Grey Partridge, this species will sometimes perch on trees or walls, and often trusts to its running powers as a means of escape instead of taking flight.



Common Partridge.
Red-legged Partridge Two

Quail

THE QUAIL.

Coturnix communis, Bonnaterre.

PLATE 58.

This dainty little game-bird, although best known as a summer visitant to the British Islands, sometimes remains with us throughout the winter, but is at the present day much less plentiful than it used to be, the cause of its decrease as regards England being attributed to the higher farming of the land, which has deprived the birds of their former rougher but more congenial breeding grounds.

The Quail appears to visit Scotland in smaller numbers than the more southern parts of Great Britain, and in Ireland was common as a resident until almost the middle of last century, but its numbers there have now greatly diminished.

It is plentiful as a breeding species over the greater part of Europe, Asia, and Northern Africa, and in winter visits South Africa.

The food, nest, and habits in general of this species closely resemble those of its near relation the Partridge.

The seven to twelve eggs, creamy-white in ground-colour and blotched with rich blackish-brown, are laid in some depression in the soil, lined with a few bents, and situated among corn or in grass or clover fields.

The cry of the male, consisting of three shrill notes, is usually rendered as "Wet-my-lips."

Order GRALLÆ. Sub-order FULICARIÆ.

FAMILY RALLIDÆ.

THE LAND-RAIL.

Crex pratensis, Bechstein.

PLATE 59.

The Land-Rail or Corn-Crake is a regular summer visitant to the British Islands, usually arriving in the southern parts of England towards the end of April, and in Scotland, including the Shetlands and Outer Hebrides, in May. It appears to be less common now than it was some years ago, especially in south-eastern England, without any apparent cause for this diminution.

In summer the Land-Rail has a wide range over Europe, migrating as far to the north as Scandinavia, and eastwards to the Yenisei, and possibly as far as the Lena, in Siberia, whilst in winter it retires to Africa.

The nest, composed of a few stalks of dead grass or other herbage, and placed in some depression in the ground, amidst growing corn, hay-fields, or other thick cover, contains from eight to twelve eggs, creamy-white in colour, spotted and marked with reddish-brown and grey.

This species feeds chiefly on slugs, worms, and various insects, varying its diet with seeds and plants.

The harsh and rather monotonous cry, often heard during the daytime as well as by night, can be so closely imitated by drawing a quill rapidly over the teeth of a comb, that the bird may sometimes be lured from its hiding-place.

In its habits the Land-Rail is shy and retiring, and is comparatively seldom seen. In the lowlands of Scotland, its favourite haunts are the hay-fields of tall rye-grass or growing corn, where it finds concealment, and seldom flies unless compelled to do so by necessity.

THE SPOTTED CRAKE.

Porzana maruetta (Leach).

PLATE 59.

The Spotted Crake is best known as a summer visitant to our islands; a few remain, however, throughout the winter months.

In Europe it breeds in localities suited to its habits, from Norway and Russia, southwards to the Mediterranean countries, also in North Africa and many parts of Asia, whilst it spends the winter in Africa and India.

The nest is built among dense aquatic vegetation in swamps, and is composed of flags and such-like material, with a lining of fine grasses; it contains from eight to ten eggs, usually a pale buff in ground-colour, blotched and spotted with rusty-brown and marked with shades of grey.

The late Lord Lilford says (*Birds of Northamptonshire and Neighbourhood*), "In general habits of skulking and concealment this Crake much resembles the Land-Rail, but it is more strictly aquatic, swimming, and even diving, when pressed by a dog, with great ease and rapidity; its flight also is quicker than that of the Corn-Crake, and it takes wing more readily than that bird."

The female resembles the male in colour, but is slightly duller.

THE CAROLINA CRAKE.

Porzana carolina (Linnæus).

PLATE 59.

A native of America, and differing chiefly from our European bird in having a black face and throat, this species has been recorded four times in Great Britain, the first in Berkshire, October 1864, the next in Glamorgan, 1888, the third on Tiree, Inner Hebrides, October 1901, and the last obtained on the island of Lewis, Outer Hebrides, in November 1913.

THE LITTLE CRAKE.

Porzana parva (Scopoli).

PLATE 59.

This small species is a rare visitant to the British Islands, some forty records, mostly occurring in the southern and eastern districts, having been noted in England, but only two in Scotland, and a like number in Ireland.

It inhabits the marshes of Central and Southern Europe, ranging as far north as the southern parts of Sweden and eastwards into Asia. It is also found in North Africa, and in winter visits the more southern portions of that country and India.

Mr. W. Eagle Clarke, as quoted in Seebohm's *British Birds* (p. 549), says: "The nest (discovered on the 24th of May) was in an extensive and particularly secluded shallow marsh near the village of Obrez. The surface of this marsh was clothed with sallow brakes, reed-beds, and areas covered with tussocks of sedge. The nest, containing seven eggs, was placed on the side, not in the centre, of one of these tussocks of medium size. It was merely a depression, amply lined with short, broad pieces of withered reed-blades, and was about six inches above the surface of the water, which was here about eighteen inches deep."

The colour of the eggs is a pale yellow-brown blotched and marked with a darker brown.

The food consists chiefly of various water-insects and their larvæ.

Though shy and retiring in its habits, the Little Crake is said to frequent open pools of water when undisturbed, and its actions when swimming closely resemble those of our Moor-Hen.

The notes have been syllabled as *kik-kik, kik* (Naumann).

According to Dresser (*A Manual of Palearctic Birds*), the female differs from the male in having the chin, lower cheeks, and throat white, the sides of the head only greyish slate-blue; lower throat, breast, and abdomen pinkish-buff, the lower abdomen and under tail-coverts as in the male, but paler."

BAILLON'S CRAKE.

Porzana bailloni (Vieillot).

PLATE 59.

Baillon's Crake is only an occasional visitant to our islands, and although very irregular in its appearances, has been known to breed in Cambridgeshire and in Norfolk, visiting the latter county more often than other parts of England. It is very rare in Scotland, and still more so in Ireland.

The home of this species is in Central and Southern Europe, also Asia Minor, Asia, Africa, and Madagascar.

The late Lord Lilford says (*Coloured Figures of the Birds of the British Islands*): "In general habits this Crake much resembles the better-known Spotted Crake, but it is decidedly more aquatic and less often met with in open marsh-lands than that bird. The nests that we found were always concealed amongst the dense masses of reeds and sedge that fringe and often conceal the runs of fresh water that meander through the vast open 'marisma'—a district that in rainy seasons or very high tides is frequently entirely submerged. The nests that I examined were exact miniature copies of those of the common Water-Hen, being loosely composed of reed-leaves, flags, and sedge. The usual full complement of eggs was seven; but we occasionally met with five or six partially 'set,' and, in one instance, with eight. These eggs vary in colour from a very pale green to a dark olive ground, but are always very closely streaked and spotted with brown."

In disposition this bird is extremely shy, and will hardly leave the protection of the dense reed-coverts among which it lives.

The food consists chiefly of insects and their larvæ, and its call-note is said to resemble that of the Little Crake.



Moor-hen
Barlow's Grebe

Coot
Water-Rail
Little Grebe

Carolina Chickadee - Spotted Grebe
Barlow's Grebe

THE WATER-RAIL.

Rallus aquaticus, Linnæus.

PLATE 59.

The Water-Rail is not uncommon as a resident in marshy places in England, where it breeds in some numbers, and during winter others put in an appearance, arriving from more northerly countries, whilst some of our home-bred birds move southwards at the same time.

It is less well known as a breeding species in Scotland, although occurring in winter, but may be found at all times of the year in Ireland. It is also widely distributed over Europe, Asia, and Africa.

The nest, composed of the leaves of withered reeds or sedge, and hidden amongst dense reed-beds or rushes, contains from eight to ten eggs, of a pale-cream colour marked with reddish-brown and purplish-grey.

In the breeding season this species utters loud, clamorous notes.

Owing to its extremely shy habits the Water-Rail is seldom seen, unless for a moment as it crouches and glides across some small opening among the reeds or rushes.

The food consists of worms, molluscs, and various insects, also the young shoots of water-plants.

The female resembles the male, being only slightly duller in colour.

THE MOOR-HEN.

Gallinula chloropus (Linnæus).

PLATE 59.

Known also as the Water-Hen, this very common bird is widely spread over the British Islands, being also distributed far and wide over Europe, Asia, and Africa.

The rather large and bulky nest, begun early in the year, and composed of the dry blades of sedge and flags, is usually placed amongst the cover of marsh vegetation, and often, but not always, low down on the branches of thorn, alder, or other trees overhanging the water. The seven to nine eggs are pale buff in ground-colour, spotted and marked with reddish-brown and grey.

The food consists of worms, slugs, insects and their larvæ, as well as shoots and seeds of plants.

The birds may often be seen on meadows near water, on the least alarm usually running for cover, as they are by nature shy and timid.

Their call-note is a loud and shrill cry, which may often be heard in the evening.

In the male bird, used for the drawing on Plate 59, the scarlet colour of the garter, usually only a band on the upper part of leg, was extended downwards along the middle of each side of the tarsus.

Mr. Robert J. Howard has drawn my attention to the fact that the female is not, "as a rule, rather larger and more vividly coloured than the male," as stated in *Yarrell* (vol. iii. p. 169), the average length of eleven males he measured being 14.26 inches, whilst the measurements of eight females averaged 13.14 inches, and not only is the shield of the cock larger than that of the hen, but the colour is brighter.

THE COOT.

Fulica atra, Linnæus.

PLATE 59.

This species is common in the British Islands, for the most part haunting wide sheets of sheltered inland water, where it can nest amongst the cover of reeds and bull-rushes, but in winter, under stress of weather, it may often be found on the salt-water estuaries of the coast, where it is said to feed on the sea-grass.

The nest is a large, piled-up structure of dead flags, reed-stems, or sedges, and contains from seven to ten eggs, yellowish-grey in ground-colour, marked with small dark brown specks.

The Coot is an expert diver, and obtains a large part of its food, consisting of shoots and buds of aquatic plants, insects and molluscs, under water, as well as slugs and worms on land.

The call-note is a loud, clear cry.

This species is still plentiful on the Broads of Norfolk, but in old days appears to have been much more numerous in those waters.

Sir Thomas Browne, describing how these birds defend themselves against their enemies, says in his *Notes and Letters on the Natural History of Norfolk* (Jarrold and Sons, p. 15), "I have seen them vnite from all parts of the shoare in strange numbers when if the Kite stoopes neare them they will fling up [and] spred such a flash of water up with there wings that they will endanger the Kite."

No doubt the "flash of water" was thrown up by their large lobed feet as described by Lord Lilford in his work on British Birds as follows: "In Epirus, where the Coot is exceedingly abundant, I several times witnessed the curious manner in which these birds defend themselves from the assaults of feathered enemies by gathering together in a compact mass and simultaneously throwing up a sheet of water with their feet when the *raptor* made its stoop. On one occasion of this sort, the assailant, an adult White-tailed Eagle, was so thoroughly drenched, that it had great difficulty in flapping along to a tree at not more than a hundred yards from the point of attack."

Sub-order OTIDES.

FAMILY OTIDIDÆ.

THE GREAT BUSTARD.

Otis tarda, Linnæus.

PLATE 60.

By rights the Crane ought to have followed the Coot in this work instead of the Great Bustard, but in order to allow a whole plate for this magnificent species, now, alas! no longer found in our islands, except occasionally as a rare straggler from the Continent of Europe, I have thought it best to give its picture as a frontispiece to the third volume.

Formerly the Great Bustard, the largest of our land-birds, inhabited open country in many parts of England, and also the Merse in south-eastern Scotland. Writing in 1770, Gilbert White mentions that "there are Bustards on the wide downs near Brighthelmstone" (Brighton), and noticed they looked like fallow deer at a distance; and the late Mr. Borrer in his *Birds of Sussex* stated that his father had come across a flock—or "drove," as they used to be called in Norfolk—of nine birds in a turnip-field when riding on these downs about 1810. Salisbury Plain was another of their well-known haunts up to the beginning of the nineteenth century, and on the Yorkshire wolds they survived until about 1832, while their latest stronghold in England was in Suffolk and Norfolk.

The last nest in Suffolk, according to Stevenson's *Birds of Norfolk*, was found on the borders of Thetford Warren in 1832, and the last bird in this county was observed on Icklingham Heath the same year. Some females lingered on for some time longer in Norfolk, where the only survivors were killed in 1838, completing the tragic history of the Bustard as an indigenous British bird.

The new system of farming which came in some time before the extinction of this fine species no doubt hastened its end, as the hens in later years usually laid their eggs in the young corn, thus exposing them to the danger of being broken or carried away by the labourers during the process of cleaning and weeding the land.

The Bustard is still found in some numbers on the plains of Europe, from

THE GREAT BUSTARD

central Germany to Spain, and ranges eastwards to Central Asia; it also visits North Africa, but rarely North-west India.

The two to three eggs, of a dull olive colour blotched with deep brown, are laid in a hollow in the soil scratched out by the parent bird.

The food consists of various greenstuffs, such as clover leaves and the blades of young corn, besides insects, worms, mice, and reptiles.

The striking attitudes assumed by the males in spring when courting are shown in the picture.

Lord Lilford, describing their habits at this time of the year on the great plains and marshes of the "marisma" in Spain, says (*Birds of Northamptonshire and Neighbourhood*): "Here these splendid birds may be observed in all their glory of perfect nuptial plumage and conscious strength and beauty, stalking about with a stately and deliberate gait, the body always carried horizontally, and occasionally showing off, apparently from pure 'pride of life,' in the Turkey-cock fashion above described. Towards evening, and in the early morning, they go off to feed in some favourite '*querencia*,' a Spanish word difficult to translate briefly, but implying a haunt which supplies a want, generally a piece of land sown with chick-peas, clover, or vetches; but they seem always to return to the marshes for the night, and, I believe, spend the dark hours in the same formation as that of a covey of Grey Partridges, viz. squatting on the ground in a closely-packed circle, with their heads outwards."

END OF VOL. III.



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