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AMONG BRITISH BIRDS IN THEIR  
NESTING HAUNTS

*Printed at the Edinburgh University Press*

By T. and A. CONSTABLE

FOR

DAVID DOUGLAS

LONDON . . . SIMPKIN, MARSHALL, HAMILTON, KENT  
AND CO., LTD.

CAMBRIDGE . . . MACMILLAN AND BOWES.

GLASGOW . . . JAMES MACLEHOSE AND SONS.



**AMONG  
BRITISH BIRDS  
IN  
THEIR NESTING HAUNTS**

**VOL. II.**

**ILLUSTRATED BY THE CAMERA**

**BY OSWIN A. J. LEE.**

EDINBURGH. DAVID DOUGLAS. 1897

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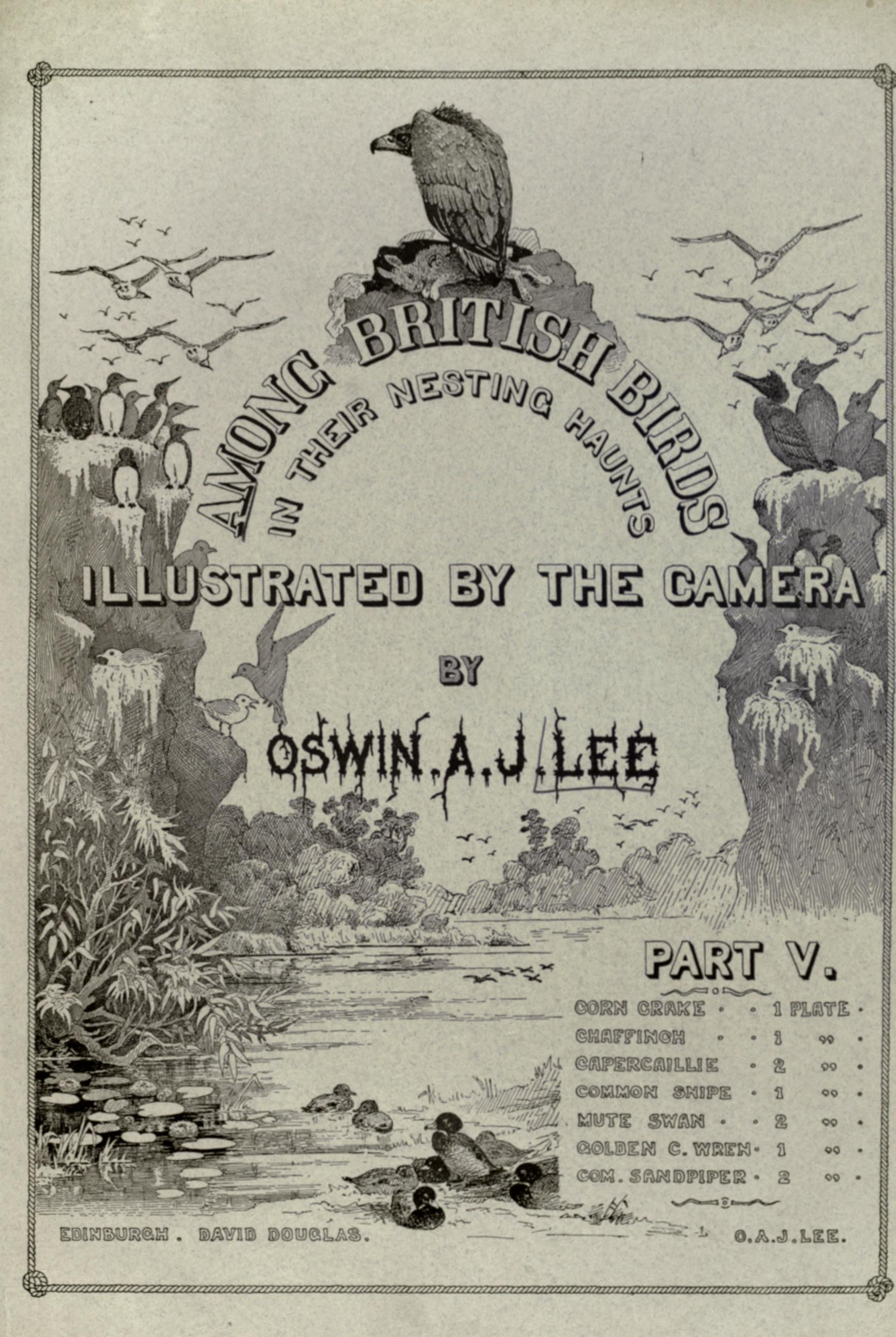
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AMONG BRITISH BIRDS  
IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

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EDINBURGH . DAVID DOUGLAS.

O.A.J. LEE.







# CORN CRAKE

## *Crex pratensis*



THE Corn Crake, or Landrail, as it is sometimes called, is a common and pretty generally distributed summer visitor to the British Islands, and breeds in all suitable localities, including the Orkneys, Shetlands, and the Outer Hebrides.

The Corn Crake prefers a very different style of haunt from its congeners, being especially fond of the dry meadows, pasture-lands, and corn-fields, often arriving in its summer quarters before the grass and clover is tall enough to conceal it; when such is the case it lurks among the ditches, hedges, and gardens until there is sufficient corn in the open fields to afford it shelter. On its first arrival it is very restless and unsettled, and its well-known note may be heard in one field for a whole day, and then not again for perhaps a week or ten days, while it is examining some other field for a nesting-site. It is a very shy, retiring bird, and is very seldom seen at all, except just after the hay has been cut and the clover has not had time to grow up again. At this time it lives in the hedges and corn during the day, coming out into the open in the early morning or at dusk to feed. It is very wary when in the open, and on the slightest alarm hurries back to the nearest cover, or crouches down in some hollow in the ground. It is very difficult to flush the bird, even with the aid of a dog, as it will run along the bottom of a thick hedge, choked with weeds and brambles, at a most surprising rate. If put up, it flies in a heavy, laboured manner, just above the ground, with its long legs hanging down, rather like a Waterhen, and drops into the nearest cover, from which it can seldom be raised a second time.

The food of the Corn Crake is chiefly composed of snails, slugs, and worms. It is especially fond of small beetles and insects of various kinds,

which it catches on the grasses. It also eats the seeds of various plants and young grass shoots. Its feeding-time is in the early morning and at dusk, and during that time its well-known note may be heard from the grass meadows, increasing in volume and dying away as the breeze carries the sound away or brings it closer. The note of this bird is very easily imitated by drawing some hard instrument smartly across a strong comb. It is a very harsh and loud '*krake-krake*' uttered twice rapidly, and then a short pause, then twice again, and so on *ad lib*. By imitating the note in this manner, the bird will come quite close if the observer keeps perfectly still. It is chiefly in the evening and early morning that the note of the Corn Crake is heard, but it is repeated occasionally during the day, and often at night. The bird generally utters its call as it stands with head erect, and generally rouses its rival in the next field.

The Corn Crake pairs shortly after its arrival in this country about the beginning of May, but eggs are not often found before the end of the month or early in June. The nest is always on the ground, generally among the meadow-hay or in some patch of nettles or dock-weed in some dry ditch or hollow in the field. It is usually placed in some slight hollow in the ground, often scraped out by the birds themselves, and is a very carefully built structure, the materials being firmly interwoven with each other, and beautifully rounded. It is chiefly composed of sedges, coarse dry grass, withered leaves and grass roots, and is carefully lined with fine dry grass, almost like a larger edition of the Meadow Pipit's nest.

The number of eggs laid varies usually from nine to twelve, nine being the average clutch. I have twice seen nests which contained fourteen eggs, and once came across one with thirteen. They vary in ground-colour from dirty bluish white to very pale buff, and are blotched or spotted with red-brown surface marks and pale violet grey underlying marks. The spots are not, as a rule, very numerous, and do not cover much of the ground-colour. They are generally pretty evenly distributed over the entire surface of the egg, and not at one end. On some specimens the marks are quite large blotches, while on others they are mere specks. They vary in length from 1.5 to 1.4 inch, and in breadth from 1.1 to 1.0 inch.

The Corn Crake often begins to sit as soon as the first egg is laid, especially if it is a second nest, the first having been destroyed.

Young in down are a rich black, and are very beautiful little creatures. I once saw an old Corn Crake with her brood of eleven newly hatched young ones in an open part of a grass field, as I lay concealed on a bank

under the hedge. She did not see me, and fed quite unconcernedly past me within a few yards; the little downy chicks ran nimbly about and caught the insects on the grass stems, often clustering round their mother as she found some choice morsel for them. She pecked the ground just as a hen does, and called the young ones round her. When I stood up she gave the alarm at once, and ran into the hedge, while the young ones squatted flat on the ground, trying to hide. When picked up they scratched and fought vigorously, running away into the hedge when liberated without trying to hide again.





## PLATE I

### CORN CRAKE. *Crex pratensis*

*May 27th, 1893.*—The nest from which this Plate is taken was on a bank at the side of a small wood at the edge of a meadow near the Lake of Monteith, Perthshire.

I heard the birds every day not far from this place, and spent a long time in searching for the nest before I at length found it. The bird almost allowed me to take hold of her before quitting her post. The nest was built in a little hollow in the ground beneath a dock plant, and was made of fine grass and withered leaves beautifully interwoven. It contained eleven fresh eggs, which were all arranged points downwards, so as to occupy the least possible space.

On my return to the nest some time afterwards I found thirteen eggs in it, and the old bird was so tame that I actually touched her as she sat on the nest. The grass had grown up round the nest and almost concealed it, though it had been quite open when I took the photograph of it. I sat down beside a tree not far off, and had a pipe while I was waiting for her return. She must have come up from behind me, as I suddenly caught sight of her not twelve yards from me, skulking along among the grass, going to the nest. She did not make any effort to conceal herself when crossing a patch of short grass, but walked slowly across and up to the nest, where she carefully turned all the eggs with her bill before settling herself upon them. This operation lasted nearly ten minutes, during which time she paid not the slightest attention to me, though I moved about two or three times. The male called continually, being answered by another bird in the next field, but I never heard the sitting bird utter any kind of sound, either on the nest or when she was coming back to it after being disturbed.





CORN CRAKE. *Crex pratensis*.

$\frac{2}{3}$  NATURAL SIZE.

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# CHAFFINCH

## *Fringilla cælebs*



NE of the commonest of our British birds is the Chaffinch. It is found in all localities in our Islands where there are trees. In bare, treeless districts it is rarely found, though in winter it is known as a common visitor in Shetland. It is common in the wooded districts in Scotland, and is met with, wherever there are trees, in most of the islands off the coast, including the Outer

Hebrides. In Ireland it breeds in all suitable localities.

The haunts of this gaily coloured little bird are the shrubberies, hedges, rows, and woods, and the gardens and orchards round our houses, and there is scarcely any of the above-mentioned places that does not afford a nesting-site for the Chaffinch. In the autumn and winter it may be seen haunting the open commons, stubble-fields, and waste gorse-covered country, where it picks up the seeds of various plants, and it is perhaps best known as an inhabitant of the farm-yards during that season of the year, where its cheery 'tweet, tweet,' or 'pink, pink,' is often heard.

The song of the Chaffinch is rather a monotonous performance, and may be represented thus on paper, 'Twēē-twēē-twēē-chūp-chūp-chūp-choo-choo-kitti-warow'; yet, as it is the first song which welcomes the advent of spring, it is very pleasant, and the little songster seems to put his whole soul into it. He is a very lively, pert little bird, and attracts the attention at once, as he sits on some twig by the roadside, or pecks about on the road, and his song may be heard constantly from the beginning of March to well on in July, and occasionally in the autumn, after the moulting-season is over. During the breeding-season the male has a note peculiar to himself, rather like the call of the Willow Wren, only much sharper and louder, something like 'Whit, whit,' occasionally lengthened into 'Wēēt, wēēt.'

During the winter the Chaffinch retires to roost in the thick evergreens in most of our shrubberies, but rarely builds its nest in such localities,

generally choosing the forked branch of some deciduous tree, such as an oak or hawthorn. The site chosen is very varied. It is often in the fork of an overhanging branch, or close against the trunk of some lichen-covered oak or elm, on the branches of the apple or pear trees in our orchards, in the hazel, whitethorn, or birch-trees, sometimes in a fir-tree on the point of a branch, or in a yew or holly bush, and perhaps oftenest of all in some hawthorn hedge. More rarely it is found among juniper-bushes or whins, and sometimes on fruit-trees on a wall. I once took a Chaffinch's nest from a cavity in the trunk of a huge ash-tree, the outside of the nest being covered with lichen glued on with bits of cobweb, resembling exactly the trunk of the tree; and in Morayshire I came across a Chaffinch's nest in a tuft of ferns growing from a hole in a wall beside the road. The outside of this nest was entirely made of bright green moss. Few birds adapt their nest so carefully to the surroundings as the Chaffinch; the outside is finished so as to resemble in colour and texture as much as possible the surrounding objects. It may be covered with tiny pieces of silvery lichens fastened on with cobwebs, or simply covered with green moss. In some situations I have seen the whole outside of the nest covered with little bits of wood, or powdered all over with little bits of touchwood.

The nest, being so carefully constructed, generally takes some time to complete, and is entirely built by the female. First the outside is built of moss, grass, and roots woven firmly together, and covered all over outside with cobwebs or lichens; then the lining is begun—a soft felting of feathers and horse-hair, and sometimes a little thistle-down. It is often more than a fortnight before the nest is ready for the reception of the eggs. The male collects the materials and brings them to his mate, who takes sole charge of the actual building, and very anxious are the birds if any one approaches the half-finished nest, flying around and keeping up incessant cries. From four to six eggs are laid. The ground-colour varies from pale bluish green to pale olive green, clouded with reddish brown, often almost concealing the green ground, and spotted or streaked with dark red brown surface spots and pale purple brown underlying markings. They vary in length from  $\cdot 80$  to  $\cdot 70$  inch, and in breadth from  $\cdot 60$  to  $\cdot 55$  inch.

Two broods are generally reared in the year, the young birds being principally fed on the larvæ of insects. When they are able to fly they are left to their own devices by their parents, and in autumn the Chaffinches collect into large flocks, and frequent the stubble-fields and stackyards in company with other finches.

## PLATE I

### CHAFFINCH. *Fringilla cœlebs*

*May 28th, 1893.*—This nest was built on the small branch of a hazel at an angle in the branch where some small leafy twigs grew out of the knot. It was built of moss, and covered with lichens and beautifully lined with horsehair, and contained five fresh eggs. The tree was an outstanding one at the top of a small wooded glen above the Lake of Monteith, Perthshire, and the whole place abounded in Chaffinches' nests.

The old bird was very tame, and sat on the nest all the time I was getting my camera fixed on to a neighbouring branch, and I thought I was going to be able to include her in the picture; but on the approach of the black focussing-cloth she took fright and hastily left the nest, and all the time I was engaged in photographing it, the two birds flew about the branches around and kept up quite a continuous chorus of anxious cries, being joined by all the cock Chaffinches in the neighbourhood.

This same day, not far from the nest in the Plate, I witnessed the fiercest fight between two cock Chaffinches that I have ever seen, resulting in the most fatal injuries to one of the combatants. I heard an awful din going on in a whitethorn bush, and on going up to investigate I saw two cock Chaffinches going at each other 'hammer and tongs,' being egged on by an admiring crowd of other birds, all calling loudly. They chased each other round and round the bush, sometimes rolling on the ground, pecking at each other, and battering each other with their wings. After an exceptionally violent struggle on the ground, one of the birds lay still and the other fluttered away to a bush near. On picking up the unfortunate loser, I found that the whole of one side of his head was practically bald, one eye was half torn out, and his left wing was broken in two places. I speedily put him out of his misery, and gave him a last resting-place under a big stone beneath the whitethorn.





CHAFFINCH. *Fringilla caelebs*.

$\frac{1}{2}$  NATURAL SIZE.



# CAPERCAILLIE

## *Tetrao Urogallus*



THE Capercaillie is a resident in certain parts of Scotland, and is chiefly confined to the counties of Perth and Forfar; but though it has been introduced in the Moray Basin, in many different situations, apparently perfectly suited to its habits, it has not increased its range to any great extent. In England and Ireland it is not found.

The Capercaillie is almost exclusively a native of the pine forests, but is occasionally found far from its favourite haunts, especially when the berries of the cranberry, bilberry, crowberry, and such like plants are plentiful, and during the breeding-season it frequents the plantations of young firs where there is plenty of cover, such as furze, bracken, and brambles. It prefers those parts of the wood where there is plenty of water, and is seldom seen far from it during the breeding-season. It is very wary, and usually flies away from the far side of the fir-tree in which it is perched, often preventing a shot being fired at it. The female is not nearly such a shy bird as the male, and may often be approached within a short distance.

During the winter, when the ground is covered with snow, the food of the Capercaillie chiefly consists of the spines of the Scotch fir. In summer various ground-berries form their chief means of sustenance, together with insects, larvæ, and the buds of various trees, and in the autumn they descend on the corn-fields to pick up the scattered grain from the stubbles. The flesh of the cock Capercaillie savours very strongly of turpentine, while that of the female is usually much more palatable. The Capercaillie is very powerful on the wing, though it seldom flies long distances at a time, and reminds one rather of a huge Blackcock. When suddenly flushed it gets up with a tremendous noise and hurries off through the wood.

In April and May the males devote themselves to courting and waging war with each other. There are regular places in the forests where they repair

to go through their curious love-songs. Some large wide-spreading pine-tree in an open part of the forest is usually chosen, and is repaired to year after year. In the early morning, or just after sunset, the males collect at this place, and go through their performances. One bird will lead off, and strutting up and down some branch he calls the attention of his neighbours and begins his love-song. The wings are drooped and the tail spread out like a fan, all the feathers on the neck being ruffled, and the head stretched out, during the performance, which often lasts three or four minutes. During the last stage of this love-song the male works himself into such a state of ecstasy that he becomes quite oblivious of everything that is going on round. Two or three birds may be seen doing this at once, the females gathering about them and croaking harshly to attract their attention. After the performance is over the males descend from their perches and pair with each of the females in succession. Fierce fights often take place between the rival males, and occasionally one of the combatants loses an eye, or is otherwise mutilated.

The Capercaillie does not make a very elaborate nest, but chooses a little hollow in the ground, which she scrapes out a little and slightly lines with a few bits of dry grass or dead leaves. It is usually placed among heather, blaeberrries, or bracken, near the foot of some tree in a fairly open part of the wood, or under a young spruce fir in some plantation, and occasionally under some low-spreading branch which sweeps the ground.

From five to fourteen eggs are laid, sometimes more, but in such cases the eggs are probably the production of more than one female. They are pale reddish buff in ground-colour, thickly spotted with reddish brown. The spots vary in size from a pin's head to tiny specks, and are generally profusely distributed over the entire surface of the egg, often concealing the ground-colour and giving it a much redder appearance. In some specimens many of the spots are as large as a small pea, and confluent, forming irregular patches of colour, while on others the spots are very small, and there are occasional patches of ground-colour with no spots at all. They vary in length from 2·4 to 2·0 inches, and in breadth from 1·7 to 1·5 inch. They are very like the eggs of the Black Grouse, but are much larger in size.

When the young are hatched the female is very attentive to them, and defends them bravely from danger. If surprised with her brood in the open, she will gather them under her wings and puff herself out, making a hissing noise and boldly facing the intruder. The young in down are buffish yellow, mottled with chestnut brown.

## PLATE I

### CAPERCAILLIE. *Tetrao urogallus*

*May 29th, 1895.*—The nest in the annexed Plate was photographed in a small plantation at the edge of a large wood in the south-east of Perthshire. It was placed at the bottom of a small spruce fir among a tangle of brackens, brambles, and rank grass, and contained six eggs.

The female was sitting on the nest as we came up, but she flew away before we got within photographing range. The nest was a mere depression in the ground, scantily lined with a little dry grass, and a few of the hen Capercaillie's loose feathers. The birds were very plentiful in this locality, and we came across three nests during our walk through the woods, being guided to them by the keeper. All the nests were in fairly open parts of the wood, generally among the young spruce-trees which were overgrown by rank heather, brambles, and bracken. We did not see any of the cocks, as the keeper informed us that they usually kept to the larger trees in the older part of the wood. He also told us that he had not seen nearly so many nests this season as he had done on previous occasions, but this was chiefly owing to the impenetrable tangles of blown-down trees, among which the birds probably were nesting in quite unapproachable situations.

The second nest we came across was in a very similar situation, but the bird would not wait to be taken, and hurriedly took flight as we approached. The number of eggs in this second nest was seven. Probably both these birds were comparatively young ones, as in another wood not many miles distant the usual number of eggs I have seen in a nest is nine or ten.





CAPERCAILLIE. *Tetrao urogallus.*

$\frac{2}{3}$  NATURAL SIZE.

Plate I.



## PLATE II

### CAPERCAILLIE. *Tetrao urogallus*

*May 10th*, 1893.—Coming through the big wood at the Lake of Monteith one evening, I walked across to examine a very curious rowan-tree. Two saplings had been bent over and plaited together to form an arch by some person, and they had increased in girth to nearly a foot in one case, and quite two feet in the other. At the foot of the larger of the trees I saw a hen Capercaillie sitting on her nest among the blaeberreries; so I went quietly away without disturbing her, as it was too dark to photograph her.

I returned next day and found her on the nest, and succeeded in getting my camera set up within range and all ready focussed, but she took fright at the click of my time-shutter, and flew off suddenly, spoiling the plate, so I had to content myself with a photograph of the nest. It was simply a hollow in the ground at the foot of the rowan-tree among the blaeberreries, and was slightly lined with a little dead grass and a few beech-leaves, a few of the bird's feathers being also in and around the nest, which contained six eggs pretty highly incubated, to judge from the tameness of the bird.

I visited this wood again in 1895, and found that the greater part of it had been razed to the ground by the gale in the previous year. The trees were lying so thick that it was quite impenetrable, and the keeper told me that he had not seen a Caper's nest that year, as the birds were probably all nesting in the inaccessible part of the tangle among the fallen trees. There was hardly a single tree left standing, those which had held firm at the roots being snapped off like matches about ten or twelve feet from the ground.





CAPERCAILLIE. *Tetrao urogallus.*  
 $\frac{1}{4}$  NATURAL SIZE.

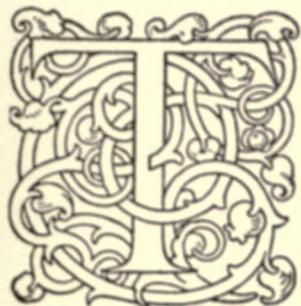
Plate II.

50  
60



# COMMON SNIPE

## *Gallinago cœlestis*



THE Common Snipe is a pretty generally distributed resident throughout the British Islands, breeding wherever swampy ground is to be found. It is commonest in Ireland, where the extensive bogs which are its haunts are most widely distributed, and is, for the same reason, rather commoner in Scotland than in England. It breeds in the Orkneys and Shetlands, as well as in the Outer Hebrides.

The Common Snipe is a very solitary bird in its habits, and is never seen in flocks. Even on migration they travel in pairs or singly, and when flushed from their favourite haunts they generally rise one at a time at some little distance from each other. Except in the breeding-season, when the male is occupied in 'drumming,' it is rarely seen on the wing during the day unless disturbed. Its feeding-time is in the early morning or at twilight, when it emerges from the shelter of the coarse rushes and sedges where it has been skulking all day, and walks about, probing the mud for the tiny worms and larvæ on which it feeds. If the tracks of a Snipe be examined on the soft mud, small holes will be seen all round them where it has been probing with its bill, which is provided with a soft reticulated surface near the tip, full of very sensitive nerves, with which it feels for its food. This is chiefly composed of slugs, tiny shellfish, the larvae of water insects, and small worms, occasionally varied by the succulent roots of various water-plants.

The Snipe is not very partial to the sea-shore, as its haunts are the same in winter as in summer, though it is usually found in the vicinity of running water during the former season, and in the marshes and swamps during the latter. When flushed it rises very quickly from the ground, usually uttering a harsh note, which may be represented on paper by 'yaystch,' generally repeated twice or thrice as it flies away, for the first few seconds in a zigzag course, and then swiftly and steadily till it drops down into some new cover.

During the breeding-season the Snipe has a rapidly-repeated note, '*tyip-tyup, tyip-tyup*,' which is common to both sexes, and is usually accompanied by much bobbing of the head. The male has also a curious aerial performance known as drumming, which takes place in the pairing-season, and often when the female is sitting. He flies high in the air, wheeling round and round in large circles, ascending gradually with rapidly-beating wings for a few moments, and then swooping downwards with his wings half open vibrating rapidly, the tail being spread out like a half-opened fan, and it is during this downward movement that the curious drumming sound is heard. It is most easily described as resembling the bleating of a goat, and ascends slightly in tone towards the end of the bleat. Great difference of opinion exists as to the method of producing this sound. Some writers say it is made by the wings, others that it is a vocal production, while some state that the sound is produced by the air rushing through the feathers of the tail like an Æolian harp. Though the Snipe is essentially a ground bird, it is occasionally seen to perch upon trees, and usually chooses the topmost twig.

The breeding-season commences about the beginning of April, and eggs may be taken from the middle of that month till late in May. The nest is generally a mere depression in the middle of a bunch of rushes or coarse grass, and is lined with dry grass; more rarely it is found among heather. Though the bird is fond of water and always frequents the swamps, its nest is usually placed on some tolerably dry piece of ground. The eggs, which are usually four in number, vary in ground-colour from pale buff and pale brown to pale olive or greyish green, and are blotched, spotted, and sometimes streaked with rich dark brown and with pale brown and grey undermarks. On many eggs the blotches are chiefly on the large end of the egg, often in a zone, and many of them confluent; some specimens have most of the streaks placed obliquely, and a few very dark brown streaks and hair-lines on them, the undermarks being usually large and fairly conspicuous. They vary from 1.6 to 1.5 inch in length, and from 1.2 to 1.0 inch in breadth.

Young in down are bright chestnut brown, spotted with white, and marked with black on the upper parts.

## PLATE I

### COMMON SNIPE. *Gallinago caelestis*

May 6th, 1893.—This nest was photographed near the shores of a small loch in South Perthshire. It was a mere hollow in the ground among the tufts of grass growing on a sort of slope, and was slightly lined with dry grass. The old bird sat until I very nearly stepped on her, when she flew away, zigzagging in the usual manner. The four eggs were very hard set, two of them being already chipped, and were most beautifully marked with rich red brown markings, chiefly on the large end of the egg, and forming a sort of irregular blotch of colour.

The male was careering about at a great height in the air 'drumming,' and we spent some time watching him through our glasses as he swooped down with vibrating wings and outspread tail.

We put up several snipe, but failed to find any more nests; but we came across one young bird crouching among the grass not far from the first nest. It ran away at a great speed when set down, tumbling over every little inequality in the ground, but always getting up again and setting off at full speed, putting me in mind of some youthful competitor in a sack race.





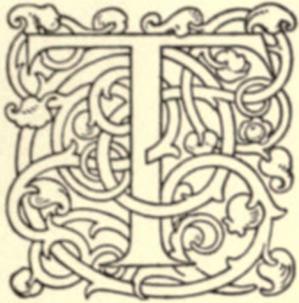
COMMON SNIPE. *Gallinago colesii*.

$\frac{3}{4}$  NATURAL SIZE.



# MUTE SWAN

## *Cygnus olor*



THE Mute Swan can scarcely lay claim to being a native British bird. It was introduced into this country about the twelfth century, and has since increased enormously, chiefly in a semi-domesticated state, and may be met with on the rivers, canals, ponds, and lakes throughout Great Britain. It has never been known to breed in an actually wild state in our islands, though in some places it appears as a summer visitor and rears its young, leaving again with them in late autumn.

The favourite resorts of the Swan are large ponds or sheets of water where there are islands covered with low shrubs or surrounded by reeds, in which it can build its nest and rear its young in safety. It arrives at its summer quarters about the middle of March, and leaves them again about the beginning of October. In winter it is often found near the sea-shore, often about the estuaries of rivers or quiet bays.

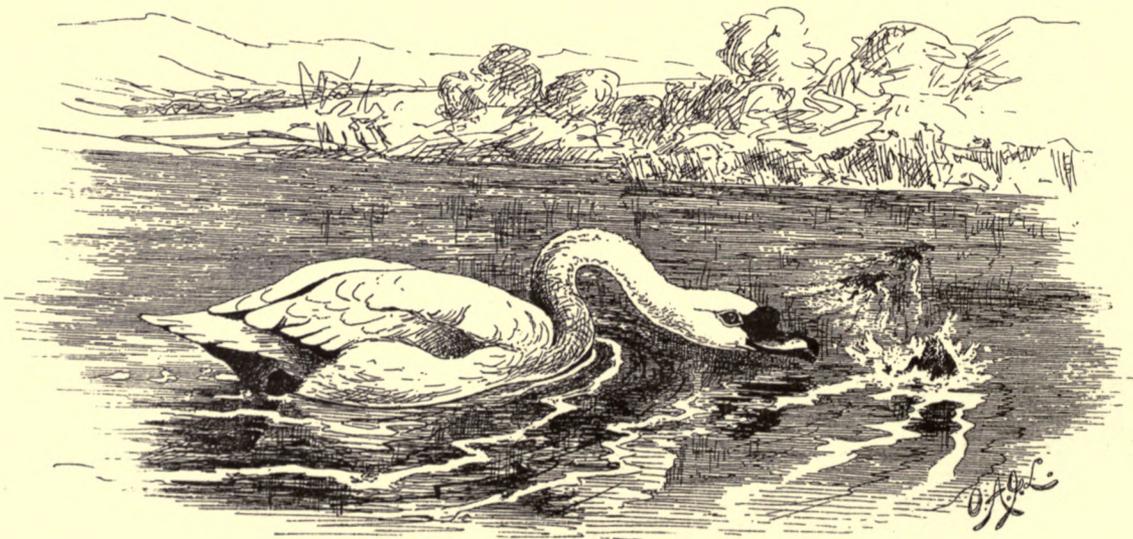
The Swan is a very powerful bird, and flies with its long neck well stretched out. As it rises from the water it makes a tremendous clapping noise, which can be heard quite distinctly more than a mile off. On migration they fly in long strings, passing over at an immense height from the ground, and the swish swish of their great wings may often be heard when it is too dark to see the birds themselves. The habits of the Swan on our ornamental waters need no description; almost every one knows the graceful way in which it arches its neck and raises its wings as it swims slowly about, showing itself off, as it were, or floats lazily about with one leg tucked up on its back behind its wings. On the water it is a most conspicuous bird, and its white plumage gleaming in the sun may be seen for miles on large lakes.

The nest of the Mute Swan is a very large structure of old reeds, grass,

and weeds, often nearly two feet high and four feet across, the eggs being generally half-buried in the reeds which form the lining of the nest. It is usually built on a reed-covered shallow in the lake or loch, or on some small, unfrequented island among the willows and tall grass, near the water. The nest is generally repaired from year to year. During the period of incubation, which usually lasts from thirty-four to thirty-eight days, the male guards the vicinity of the nest from all intrusion, swimming up to the intruder and hissing angrily, and will drive off any unfortunate duck or coot that comes too near the sacred precincts.

The food of the Swan consists chiefly of water-plants, but frogs are occasionally taken as a change, and it will eat water-insects and fresh-water shell-fish.

The number of eggs laid by the Swan varies from five to nine. They are greenish white in colour, somewhat rough in texture, and generally rather oval, being much the same shape at each end. They vary in length from 4.9 to 4.4 inches, and in breadth from 3.2 to 2.9 inches.



## PLATE I

### MUTE SWAN. *Cygnus olor*

*May 2nd, 1895.*—The nest from which this Plate was taken was built in a patch of iris in a small loch near Doune, Perthshire. The birds nest in this place year after year, generally rearing their young successfully.

The nest was a huge pile of weeds, sticks, iris leaves, and dead reeds, and was fully five feet across and very nearly two feet high, and contained three eggs. The male hurried up from the other end of the loch when he saw me approaching the nest in my boat, but did not trouble to stay when he saw I was not going to disturb his mate, retiring to a distant part of the loch, where I saw him, tail up, feeding in the shallows.

When the young cygnets are newly hatched the old birds guard them very jealously, and will attack any one who goes too near them, driving away any birds that may come near. On a small pond close to a house near Forres, a pair of Swans had succeeded in hatching out three cygnets, a Mallard had also got her brood there. The old Swan was dreadfully angry whenever the Mallards intruded on his part of the pond, often chasing them, and in about a week he succeeded in killing the whole of the ducklings, seizing them in his bill and shaking them, or holding them under the water till they were choked.





MUTE SWAN. *Cygnus olor*.

Plate I.

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## PLATE II

### MUTE SWAN. *Cygnus olor*

*April 30th, 1896.*—This nest is built by the tame Swans every year in a great reed-bed near the Lake Hotel, on the Lake of Monteith. Unfortunately, they do not choose a very safe place, as a rule, and the local boy can wade out to it with ease, hence the eggs have a knack of disappearing most mysteriously.

The nest is an enormous structure, generally consisting of a cart-load of dead reeds resting on the bottom; a few reeds are usually stripped of their leaves, and these, mixed with a little down, form the lining. When the female leaves the nest for food the male usually takes her place, and they guard the approach to the nest most carefully, driving off any Coot or Waterhen that may come too near.

When I photographed it there were four eggs in the nest, and the female was sitting on them; she was so tame that I waded right up to the side of the nest and put my arm under her to count the eggs, and she took hardly any notice of me at all. Both birds take turns to swim over to the hotel in the morning, where they are fed daily by the hotel-keeper's wife.





MUTE SWAN. *Cygnus olor.*

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# GOLDEN-CRESTED WREN

## *Regulus cristatus*



THE Golden-crested Wren is very widely distributed throughout Great Britain and Ireland, and is a resident in this country. It has largely increased its range in Scotland during the last century, chiefly owing to the extensive planting of fir-trees during that time. It breeds in many of the inner islands, but has not as yet done so in the Outer Hebrides. In Orkney and Shetland it is common during the migrations.

Its favourite haunts are among the well-wooded parts of the country, especially in the large plantations and woods of spruce-fir and larch, and among the ornamental pines and firs in our shrubberies. During the winter it often wanders along the hedgerows in search of food, generally in the company of Tits. It is sometimes seen in quite bare places busily engaged in hunting for insects among the juniper bushes, but this is, as a rule, during the migration, when tired and hungry after a long journey. Like the Tits, it hangs upside down while exploring the underside of the branches for insects, and goes carefully over the whole branch, sometimes hovering under a leaf and picking the insects off. It is very difficult to see, and some movement of a twig alone discloses its whereabouts, as its tiny call-note, 'si-si-si,' is very difficult to locate. It is not at all a shy bird, and will explore a branch carefully, for insects, within a few feet of the observer's head, hardly seeming to notice him.

The food of the Golden-crested Wren consists chiefly of the insects found among the leaves or bark of the trees, or on the young shoots; it also catches them as they fly through the air, making quite an audible snap with its bill as it seizes them. During winter it also eats tiny seeds, chiefly those of the birch, and sometimes small berries.

The song of the Golden-crested Wren is not a very loud or attractive one, though it seems just to match the place where it is usually heard, in the

depths of the pine woods. It used always to put me in mind of a blacksmith's hammer ringing on the anvil, and may be represented by the syllables '*tūi-tūi-tūi-tūi-tyip-a-rip-a-rip-a.*' Sometimes the little songster pours forth his melody as he sits perched on the top of some small fir-tree, or as he chases his mate with lightning-like rapidity through the branches, or when he hangs suspended from the drooping branches of the spruce or larch.

About the middle of May, sometimes earlier, the Golden-crested Wren prepares its nest, which is usually slung from a branch, like a tiny hammock. The commonest site is at the very end of a spruce-fir branch, usually where two or three small twigs branch out and form a slight thickening of the foliage. The nest is fairly deep and very nearly spherical, and is securely woven on to the surrounding twigs; it is made of green moss and horsehair, felted together with cobwebs, and sometimes covered with a few tiny bits of lichen, and is carefully lined with a profusion of feathers. The edge of the nest is often carefully interwoven with feathers, with their tips pointing towards the centre of the nest, as a means of preventing the eggs from being thrown out when the branch is violently swayed by the wind. In plantations of young spruce-trees the nest is often placed almost against the trunk at the very top of the tree among the last few twigs. The Golden-crested Wren is a very close sitter, and will not leave her nest until the branch on which it is placed be struck with a stick or shaken violently. When flushed from the nest she seldom flies far, often not leaving the tree, but hops about the twigs around, peering inquisitively at the intruder, but not exhibiting much anxiety unless there are half-fledged young in the nest, when she flies anxiously about, often coming within a couple of feet of the intruder, and incessantly uttering her plaintive call-notes.

The eggs of the Golden-crested Wren vary in number from five to ten, sometimes even as many as twelve are laid, though how the nest holds the young of such large broods is a marvel. They are usually a very delicate buffish white, thickly spotted with very faint tiny red markings, often so thick as to conceal the ground-colour and to give the eggs a reddish appearance. On some specimens the markings form a sort of zone round the large end of the egg, while other specimens are very nearly white and have no markings. They vary in length from  $\cdot 60$  to  $\cdot 51$  inch, and in breadth from  $\cdot 44$  to  $\cdot 40$  inch.

After the young are able to fly they form a little family party with the old birds, and keep together till the following spring, when they begin to look out for mates.

## PLATE I

### GOLDEN-CRESTED WREN. *Regulus cristatus*

*June 1st, 1893.*—This nest was fully eighteen feet from the ground, on the very point of a branch of a weeping spruce-fir, overhanging the river Teith, near Doune, Perthshire.

It was beautifully made of moss and little bits of sticks felted together with cobwebs, and a few bits of lichen stuck on outside; it contained ten very highly incubated eggs. The photographing of it was rather a difficult task, as I wanted to take it *in situ* for my book. I was rather puzzled as to how to get it done, but I managed it as follows:—I fastened a piece of light rope to the ends of two branches on the same side of the tree and about the same height up, and carried the other end a good bit up the tree, making it fast to the trunk and pulling it tight. I then got out along the branches and held on by the rope, letting myself and camera down till the two branches were under my arms and my feet rested on some branches below; from this point of vantage I focussed my camera and took two photos, with the result in the Plate.

The old birds did not betray the least anxiety during the whole of the performance, but kept hopping about from twig to twig, calling to each other, and peering at me through the branches with great interest; the female came within two or three feet of me several times without the slightest fear. The male kept pretty much to the top of the tree, and warbled his little song in the bright sunlight.





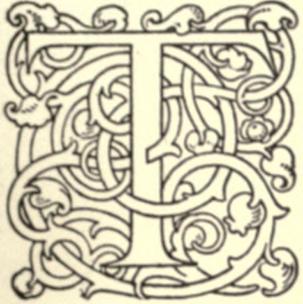
GOLDEN-CRESTED WREN. *Regulus cristatus.*

NATURAL SIZE.



# COMMON SANDPIPER

## *Totanus hypoleucus*



THE Common Sandpiper is a regular summer visitor to the British Islands, and breeds plentifully on most elevated moorlands which are its favourite haunts, as well as by the banks of our Scottish rivers and on the shores of our lochs, however wild or lonely. On the low-lying parts of the south-east of England it is only known on migration, but it is plentiful in Wales and in most counties north of Derbyshire. It breeds in every county in Scotland, including the Orkneys, Shetlands, and the Outer Hebrides, and is also a common bird in most suitable localities in Ireland.

The favourite haunts of the Common Sandpiper are the shores of the lochs, ponds, rivers, and mountain streams, on the sandy banks and gravel beds of which it may be generally seen. It is rather an unobtrusive bird, but its cheery call is loud and penetrating. By the side of some little burn it may be seen running nimbly up and down, sometimes flying along the surface of the water, making little rings in the pool with the tips of its wings. Its flight is rapid, and is performed in series of quick beatings alternated by a sort of skimming motion, and it usually alights on some stone, elevating its wings for a few seconds before closing them. It may often be seen perched on some boulder sticking up from the water uttering its call-note, 'wēēt-ēēt-ēēt-ēē-īt,' and bobbing its head up and down and jerking its tail.

Each pair of birds seem to have their regular haunts to which they return year after year, and I have known a nest in the same hollow beside a boulder for four years in succession, though it had been robbed on two or three different occasions. On their first arrival the males are very demonstrative in their attentions to the females, often running about round them with drooping wings and keeping up a sort of trill, or flying up into the air in circles and calling incessantly to them.

The males may often be seen to perch on the tops of wooden fence-posts or

on stone walls, and I saw one bird which habitually ran backwards and forwards on the dead branch of a Scotch fir fully twenty feet from the ground.

The food of the Common Sandpiper consists chiefly of the larvae of insects, worms, beetles, seeds, which it catches on the banks of the streams or among the droppings of the cattle. The Common Sandpiper is occasionally known to swim, of which fact I have been a witness. I was resting beside a shallow burn which ran into the Lake of Monteith one June day in 1893, and was lazily watching a Common Sandpiper catching insects on the shore on the far side of the burn, gradually working its way towards me. Its mate must have been somewhere behind me, as I heard it call once or twice. The bird paused for a moment beside the stream when it came to it, and bobbed its head up and down before running into the water, which it crossed, being carried down a little way by the slight current. It jerked its head all the time it was crossing like a Water-hen. I hardly took in at first that it had actually swum across, but on my getting up the bird flew away, and I found that the water was fully eleven inches deep in the middle of the pool.

The nesting-season of the Common Sandpiper begins about the second week in May. The nest is usually not very far from the water, and is generally placed on some dry bank under cover of some stone or tuft of heather or grass; sometimes under a bramble-bush or dock-weed plant. On some occasions the nest is found several hundred yards from water, on dry banks in a wood or near a hedge. It is usually little more than a slight hollow scratched in the ground and scantily lined with a little dry grass, dead leaves, or bits of dead fern.

Four eggs are laid, which are fairly large in comparison with the size of the bird. The ground-colour may be any shade between pale greenish white and rich cream colour, blotched and spotted with light red and dark brown, and with purple grey undermarkings. The spots are not very large as a rule, and vary in size from tiny specks to a fair-sized pea; they are generally most numerous on the large end of the egg, and sometimes form a zone round it. On some specimens most of the spots are confluent on the large end, and form an irregular blotch there, gradually becoming scattered towards the small end. They vary from 1·6 to 1·3 inch in length, and from 1·1 to ·98 inch in breadth, and are very pyriform in shape.

Young in down are pale grey speckled with black on the upper parts, which are brownish. They are often found in the nest for many hours after they are hatched. The old birds are very attentive to them, and display great anxiety if any danger threatens them, tumbling and fluttering along the ground and trying to draw away the intruder.

## PLATE I

### COMMON SANDPIPER. *Totanus hypoleucus*

*June 12th, 1895.*—This nest was built among the blaeberreries on the side of the road near Loch Morlich, Glenmore Forest, Strathspey. The whole place swarmed with Sandpipers, and I came across no less than seven nests during my walk round one side of the loch, and saw many more pairs whose nests I was unable to find.

The birds nearly always chose the far side of the road from the loch, and betrayed the whereabouts of their nests by running across the road to the edge of the loch, sometimes fluttering along with their tails spread out like a fan and trailing on the ground.

One nest which I found contained four young ones newly hatched, and the anxiety of the poor little parent-birds was most touching. They fluttered and tumbled about on the ground, making a sort of squeaking noise like 'weēē-ēē-ēē,' sometimes rolling over and kicking with their legs and flapping with one wing, often coming within a foot or two of me in their anxiety to draw me away from the nest. Most of the eggs I found were hard sat, but one very handsomely-marked clutch was quite fresh. I followed one bird for some distance as she led me along, tumbling over on the ground, and when she had succeeded in getting me about fifty yards from the nest, she suddenly rose in the air with a joyful 'weēt-weēt,' and joined her mate on the shore some distance away.





COMMON SANDPIPER. *Totanus hypoleucus*.

Plate I.

$\frac{2}{3}$  NATURAL SIZE.

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## PLATE II

### COMMON SANDPIPER. *Totanus hypoleucus*

*June 1st, 1893.*—This nest was built under a bramble-bush in a wood by the side of a small loch in South Perthshire. It was a slight hollow in the ground lined very carefully and neatly with tiny sticks, a dead leaf or two, and a great many dead spines of the Scotch fir. The old bird was very wary, and we saw her running away from the nest long before we got near.

I got two photographs taken of it, and then lay down beside a tree not far off and watched for the return of the old bird. In about a quarter of an hour she came back and alighted on the roof of an old boat-house, running up and down and calling anxiously, bobbing her head and jerking her tail. After a few minutes she flew down on to the ground near the nest, and began running away from it, disappearing behind some brushwood; I caught sight of her a few moments after stealing quietly up from a different direction, stopping every now and then and stretching out her neck, sometimes calling inquiringly, being usually answered by her mate from some point on the shore. After running backwards and forwards two or three times, she got quite near the nest and sneaked in under the bush, raising her wings for a few seconds before settling herself on the nest. When she had been settled for a few minutes I stood quietly up; she immediately rose off the nest and tumbled and fluttered across an open piece of grass, rising finally at the edge of the loch and alighting some way off, where she called occasionally until I had gone away.





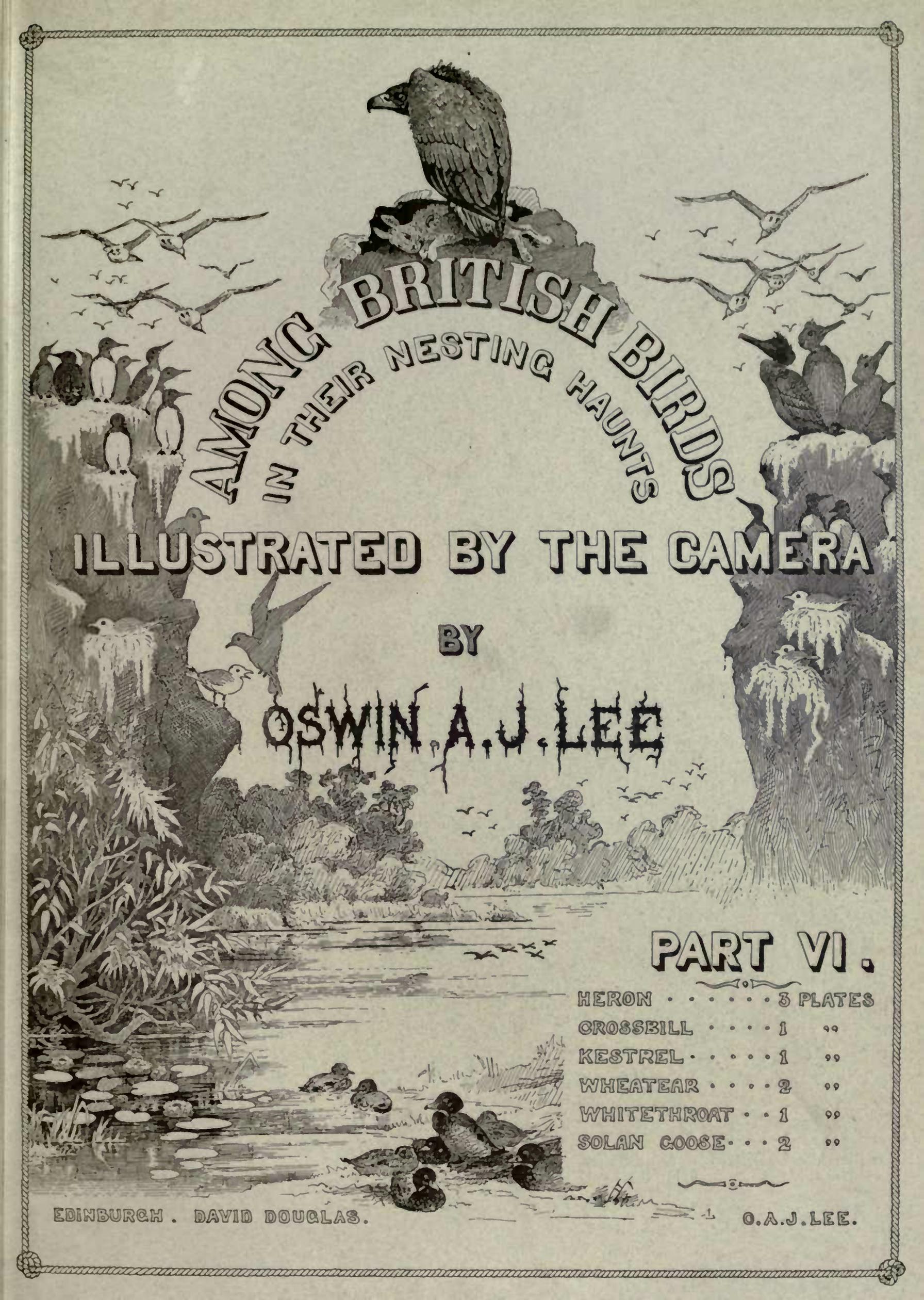
COMMON SANDPIPER. *Totanus hypoleucis*.

Plate II.

$\frac{2}{3}$  NATURAL SIZE.

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AMONG BRITISH BIRDS  
IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

PART VI.

HERON . . . . .	3 PLATES
CROSSBILL . . . . .	1    "
KESTREL . . . . .	1    "
WHEATEAR . . . . .	2    "
WHITETHROAT . . . . .	1    "
SOLAN GOOSE . . . . .	2    "

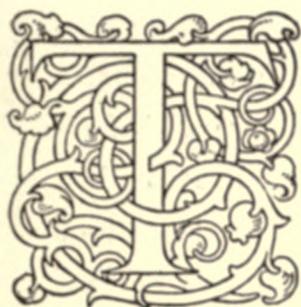






# HERON

## *Ardea cinerea*



THE Common Heron is a somewhat locally distributed resident throughout Great Britain and the adjacent islands. It does not often breed in the Orkneys and Shetlands, and still more rarely in the Outer Hebrides.

The favourite haunts of the Heron are the shallows in lakes, rivers, and ponds, and it is rarely seen at any distance from water. It is especially partial to swamps dotted with little pools, where it may be seen standing with its head buried between its shoulders, ready to dart its long bill into the water to catch some unwary frog or fish. In the autumn and winter Herons may be seen in small parties on the mud-flats at the mouths of rivers, wading about in the shallows with slow, stately steps, every now and then darting down their bills, securing some small fish, sometimes standing motionless for a considerable length of time with one leg tucked up. The flight of the Heron is very rapid, and is performed by slow and steady beats of its huge wings; when flying, its head is drawn back to the shoulders, and its long legs are stretched out behind under its tail as a sort of rudder.

It is a very wary bird, and generally takes flight long before the intruder can get within gunshot. It is most partial to running water, and the reedy backwaters in some of our streams and rivers are its favourite resorts in the early morning and at dusk, which are its principal feeding-times. During the day it may often be seen perched on the ground a long way from water, with one leg drawn up, apparently half asleep, but in reality as wary as ever. Although it prefers to nest in colonies, it is hardly a gregarious bird, and is rarely seen in parties of more than five or six, and solitary Herons are a very common sight, being probably young birds of the year which have not paired, and have selected some quiet and secluded spot where they can fish and doze

alternately, for, like the Cormorant, the Heron is a great glutton. The food of the Heron is largely composed of fish, frogs, lizards or newts, insects, and sometimes mice. It occasionally kills young coots and waterhens, and at the Lake of Monteith I found the remains of a young mallard in a nest. In winter, when its inland haunts are frozen up, it descends to some secluded part of the shore, where it devours small crabs and shrimps. Its note is a harsh guttural croak, and is mostly uttered on the wing; as a rule, however, the Heron is a very silent bird, except at its breeding-place, where a perfect chorus of cries may often be heard.

The Heron is a very early breeder, and eggs may be taken during the first week in March; in the North, however, they seldom lay until the end of the month. The favourite nesting-place of the Heron is in the tops of tall trees, sometimes on the flat branches of larch-trees or Scotch fir, sometimes near the top of a tall spruce or silver-fir, or on the topmost branch of some deciduous tree. In localities where trees are scarce it builds its nest on ledges of cliffs or on ruined buildings, sometimes on ivy-covered rocks, and occasionally on steep sloping ground. The nest is very often an immense accumulation of sticks, turf, and sometimes a little grass or moss, and is usually repaired year after year. It is generally lined with finer twigs of larch, fir, or other kinds of trees. By the time the young are able to fly the whole nest and much of the tree is completely whitewashed by the droppings of the birds, and the nest is usually a mass of decaying fish, which on a close, hot day in spring gives forth a sickening stench. Many of the young birds usually die, and these may be found on the ground beneath the trees with broken eggshells and remains of fish.

From three to five eggs are laid; they are greenish blue in colour, rough and chalky in texture, the shell being generally full of tiny pores, and sometimes covered with little chalky excrescences. There is not much variety in the colour or shape of the eggs, though some specimens are much paler in colour than others. They vary in length from 2.6 to 2.4 inches, and in breadth from 1.8 to 1.5 inch.

Only one brood is reared in the year, the whole of the young seldom arriving at maturity. When the young birds are nearly full-fledged they climb about the branches round the nest, helping themselves about with their bills like parrots, and keeping up an incessant chorus of '*kėk-kėk-kėk.*' There is often a considerable interval between the laying of each successive egg, and as the Heron begins to sit as soon as the first egg is laid, the young in the same nest are frequently of very different sizes and ages.

## PLATE I

### HERON. *Ardea cinerea*

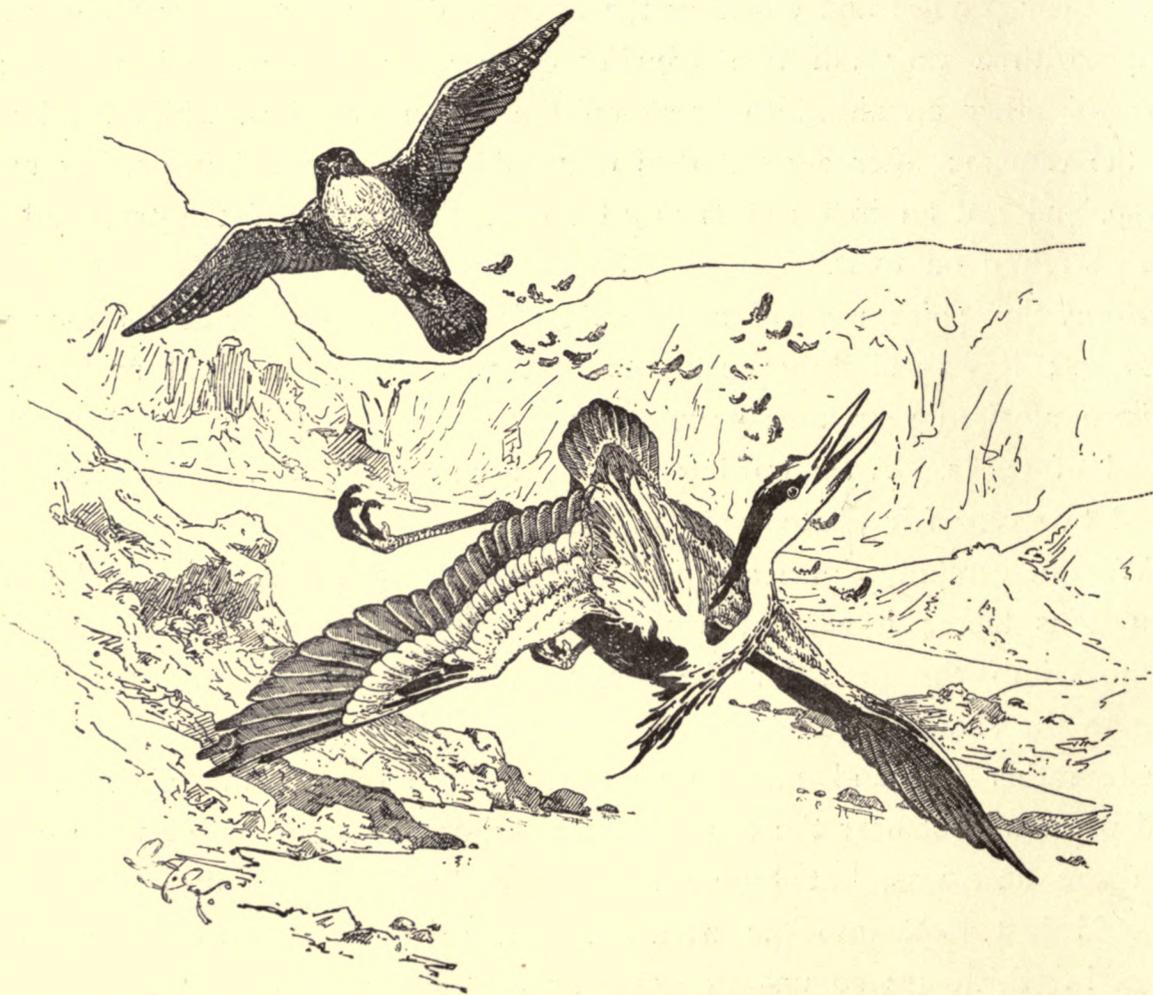
*March 25th*, 1893.—Crossed the Lake of Monteith with my brother to try and get some photographs of the Herons' nests in the Big Wood. The day was dull and unpromising, but we hoped it would clear by the afternoon. As we came through the wood where the Heronry was we heard the old Herons leaving their perches and croaking the alarm. We selected a nest for our first attempt, with a very tall tree growing quite close to the one it was in; I sent my brother on ahead to break off the rotten branches, while I followed with the camera; after a great deal of trouble we succeeded in getting up to the top, and got an iron rod clamped round the trunk of the tree and the camera screwed on to it.

From this point we had a splendid view of the nest with its four pale blue eggs; it was slightly below us, and was one of the old nests which had been repaired year after year, and must have been composed of nearly a cartload of sticks. After waiting a short time we got a little sunshine and secured two very fair photographs of the nest.

We got carefully down again and went over to another tree, and started preparations there; it was far worse getting up the second tree than it had been to climb the first, for the lower half of it was almost unclimbable owing to the sharp spikes of broken branches. However, we got up all right at last; rather hot and much scratched, but the camera was all safe. We found when we got near the top that it was not nearly so high as the one in which the nest was, but by getting up singly till it got dangerously thin we could just look into the nest. There are few places to set up one's camera in which are so unsatisfactory as the shaky top of a thin spruce-fir, and I had not been up two minutes when I dropped my camera screw! Of course it went to the ground. I had to go down and hunt for it, and found it after a short search. The branches were becoming fewer with each journey, but I had no camera to bother me and I soon got up, my brother shouting out to 'Hurry up' as the sun was coming out. I managed up at last and got

the camera fixed, but by that time the sun had gone in and a breeze had sprung up, so we sat and smoked for half an hour and watched the old Herons sitting on the tops of the neighbouring trees.

At last the sun came out and we took one or two photos of the nest. We climbed to all the nests in the Heronry. Two of them had four eggs in each, one contained only two, and the remaining four had three eggs each. The nests were all built in the tops of very tall spruce-trees, and were large collections of sticks and heather roots lined with twigs of birch and larch, generally covered with a whitish sort of scurf of the birds' plumage.





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HERON. *Ardea cinerea*.

Plate I.

$\frac{1}{10}$  NATURAL SIZE.



## PLATE II

### HERON. *Ardea cinerea*

*April 9th, 1894.*—This nest was photographed in a small plantation on a steep hillside in Tweedsmuir, Peeblesshire. There were only two nests, in low Scotch-fir trees about fourteen feet from the ground. I noticed that there was an excellent place of concealment in a thick tree about twelve yards from the nest, and conceived the idea of photographing the old bird on its nest from there; so I prepared a seat for myself in the thickest part of it, surrounding it with branches, and had a string from there to my camera, which I placed all ready focussed in a tree overlooking the nest. I waited about four hours in my ambush, but the old bird was so scared by the camera that she would not come near the nest.

I took down my camera and fastened up a large biscuit-box covered with green baize in the same place, and left it there all night. The old bird was on its nest as usual in the morning, so I put up my camera again in the same place and got it all focussed and set, and covered it with the green baize, leaving the lens looking out, and retired to my ambush.

Presently the old bird returned and flew round and round the wood croaking, but evidently noticed that some change had been made in the green baize cloth, and it was very nearly five hours before she alighted on the nest.

I waited anxiously for her to sit down on her eggs, but she stood with head erect for nearly ten minutes, during which time I scarcely dared to breathe; but at last to my intense relief she turned her eggs carefully with her bill, and after poking them between her legs settled herself on the nest. I waited till she was quite settled, and then pulled the string, with the result in the Plate.





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HERON. *Ardea cinerea.*

Plate II.

$\frac{1}{2}$  NATURAL SIZE.



### PLATE III

#### HERON. *Ardea cinerea*

*May 6th*, 1895.—The nest from which this Plate is taken was built in the top of a blown-down tree in Cardross Big Wood, near the Lake of Monteith, Perthshire. After the heavy gale of November 1894 the entire part of the wood in which the Heronry was, was levelled with the ground, and the great trees lay piled in a fearful tangle one on the top of another. Curiously enough the Herons did not desert the site of their old colony, but built their nests on the fallen trees, choosing the highest of them for that purpose.

Most of the nests contained fairly large young birds when I visited them, but they were very difficult to get at, as the whole place was blocked with fallen trees and inundated with water. However, with some little trouble I managed to rig up my camera in one tree and look into a nest in the next one.

While I was photographing the nest, an old Heron arrived with a fair-sized eel in one of the other nests some distance off, and judging by the noise which the distribution of this choice morsel produced, I expect it was considered very palatable.





HERON. *Ardea cinerea*.  
 $\frac{3}{16}$  NATURAL SIZE.

Plate III.

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# COMMON CROSSBILL

## *Loxia curvirostra*



THE Common Crossbill is perhaps best known as a rather irregular winter visitor, and it has been obtained in almost every county in Great Britain at this season. In Scotland it is a resident in some of the well-wooded central counties, and breeds there in considerable numbers; it has also been seen both in the Orkneys and Shetlands, but is not known in the Outer Hebrides. It has been recorded as breeding in several counties in England, and is also an occasional visitor to Ireland.

The haunts of the Crossbill are the dense forests of Scotch fir, larch, and spruce which grow in many parts of our Islands. They are very active birds when feeding, and much resemble the tits in their actions, sometimes hanging on to a branch or helping themselves about among the twigs with their strong bills. They are exceedingly tame during the winter and early spring, allowing the observer to come quite close to them; they fly from tree to tree with undulating flight rather like that of the Greenfinch. In the early spring I have had good opportunities of watching them in the forests of Glenmore and Rothiemurchus, as they are fairly abundant there. The males have a low musical song, reminding one rather of some of the notes of the Starling, but I never heard the females utter any note except a loud and somewhat prolonged '*tsoop-tsoop*.' When feeding, the Crossbill wrenches off the cone with its powerful beak and flies with it to some thick branch, where it holds it firmly against the bough with one claw and picks it to pieces, extracting the seed, which is then cracked and the kernel eaten.

The Crossbill is a gregarious bird, and usually wanders about in winter in large flocks; even during the breeding-season the males are usually seen in small companies going to feed on the cones of the Scotch fir. When flying from one place to another the male usually perches on the top of some fir-tree, invariably choosing the highest twig; here he will sit for some time uttering his loud call-note, '*tsoop, tsoop, tsoop*.'

The Crossbill is a very early breeder, and generally begins to lay its eggs in the end of February or the beginning of March, often when the ground is still covered with snow. The nest is usually built in a fir-tree of some sort, and is very difficult to find. The favourite position is at the end of some horizontal branch near the top of a high tree, or in the fork formed by the topmost twigs. It is almost impossible to discover it, unless the male be observed taking food to the sitting bird.

The nest is built on the same principle as the Bullfinch's, having an outside nest of sticks loosely put together in a sort of platform, and an inner one of soft materials, usually rather deeper than the former. The outside platform of sticks is made of fairly thick twigs of the Scotch fir, generally dead, and loosely put together; inside this, and interwoven with it, is placed the nest proper, which is composed chiefly of lichens and a little dry grass, and lined with moss, wool, and the green spikes of the Scotch fir, more rarely a few feathers. Some nests have large quantities of deer's hair in them. The cup in which the eggs are placed is usually about  $2\frac{5}{8}$  inches across, and about  $1\frac{1}{4}$  inch deep; the nest is often placed under the shelter of some small bunch of foliage.

The number of eggs laid varies from three to five, though four is perhaps the most common number found. They vary in length from .98 to .80 inch, and from .72 to .60 inch in breadth. The ground-colour varies from a dirty white to pale greenish blue, and the surface markings are dark purple brown or reddish brown, not very large as a rule, some of them being spots, others streaks, and a few hair-lines or scrawlings occasionally may be found. The underlying spots are pale reddish brown, and are usually of the same character as the surface markings. The markings are generally most numerous on the large end of the egg.

The female sits very close, often not leaving the nest until the branch in which it is placed is roughly shaken. The male is very attentive to her, and feeds her on the nest; and it is only by watching him to the tree and hearing the low chirruping of the female that the nest is in most cases to be discovered.

When the young are hatched they are fed by their parents on the larvæ of insects and small grubs until they can fly, when the family party generally joins the others in the neighbourhood, forming a flock, which at once commences its gypsy life, wandering from place to place for fresh feeding-grounds. Cones stripped by the Crossbill may be found lying in hundreds under the trees which they frequent.

## PLATE I

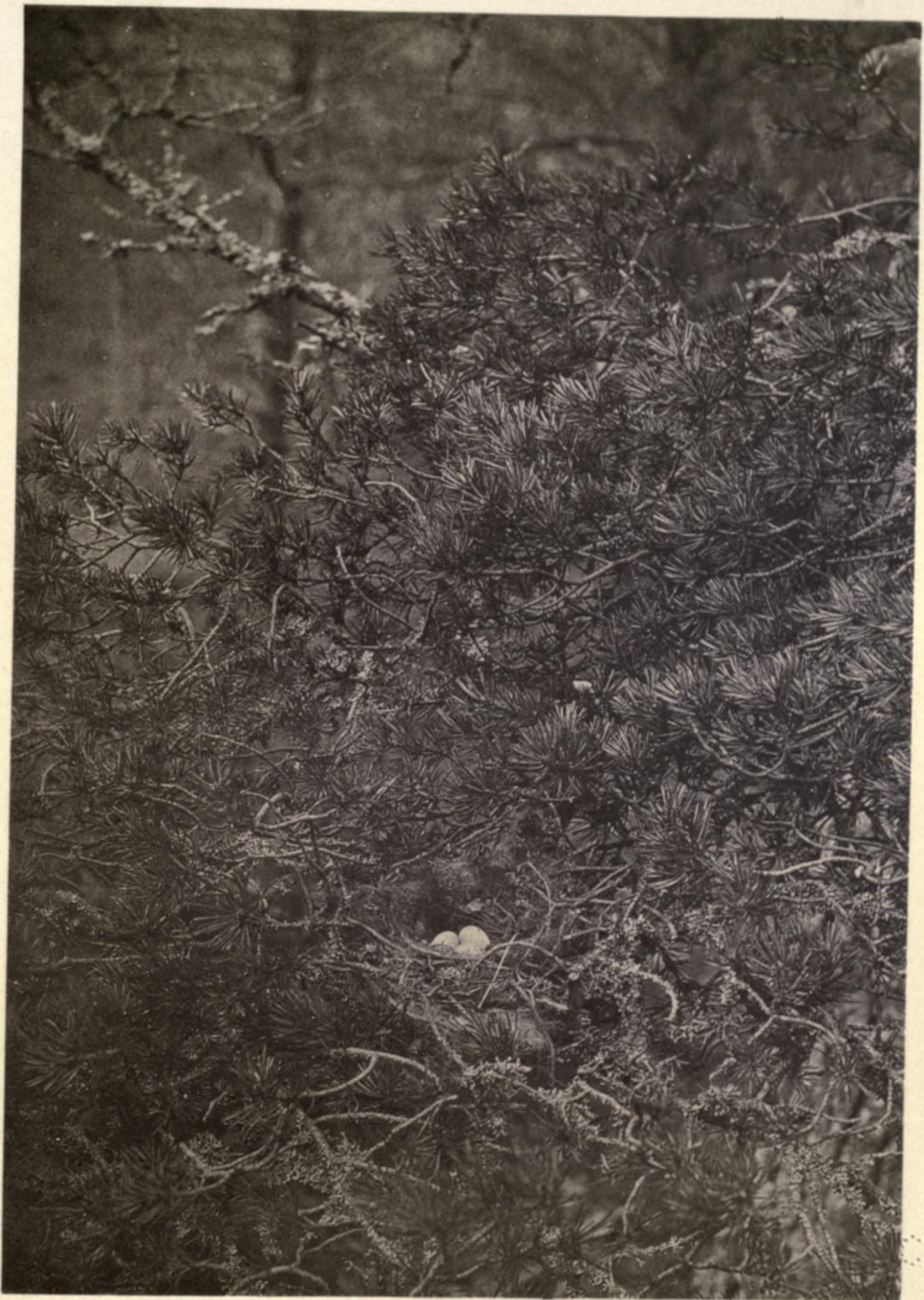
### CROSSBILL. *Loxia curvirostra*

*March 7th, 1896.*—The nest from which this Plate was taken was near the end of a horizontal branch in a tall Scotch fir in the Glenmore Forest, Strathspey.

I spent three days watching the birds before I succeeded in finding the first nest. The first day was very cold and windy, with heavy snow-showers, and the trees and ground were quite white. One of the keepers told me he had seen the Crossbills at a certain knoll, covered with big trees, feeding on the cones, so I repaired thither. I saw two pairs of birds during the day, and after much difficulty succeeded in following them on three occasions to a clump of trees, of which I climbed three, but only found an old nest. Next day I only saw two or three old males, but could not locate any likely spot for a nest. On the third day I succeeded in following one of the males for about half a mile, and saw him disappear among the top branches instead of perching on the extreme top, as he usually did; however, he flew off again before I could get up, so I sat down and waited. In about half an hour he came back and flew into the same spot, and I distinctly heard the chirruping of the female as he fed her on the nest. It was rather a bad tree to get up, as it was fairly large in diameter, and had no branches at all for forty feet; besides one side of the trunk was caked with snow. I got up at last, and found the nest with three eggs. It was built in the usual way—a platform of Scotch fir twigs and the nest in the middle, chiefly composed of hair-lichens, sheep's wool, moss, and some green fir-spines, with a little deer's hair in the lining.

Next day I returned with my camera, and got two very good photographs of it by getting up the next tree with my camera and looking across at it. I found other three nests on the same knoll, each containing three eggs; one clutch was very highly incubated. The old birds were quite tame, and only left the nest when I commenced photographing operations.





CROSSBILL. *Loxia curvirostra*.

$\frac{1}{2}$  NATURAL SIZE.

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# KESTREL

## *Falco tinnunculus*



THE Kestrel is by far the commonest bird of prey in the British Islands, and is the most universally distributed, breeding quite as freely in bare rocky districts as it does among the woods and plantations. It is found on most of the Scottish islands, including the Orkneys and the Hebrides, and breeds in many of them, though it retires southward during the winter.

The Kestrel is a regular migrant, although it is seen in many places during winter throughout Great Britain; and the greater number of our Kestrels winter in the neighbourhood of the Mediterranean, chiefly on account of the scarcity of their usual food in this country during winter. The graceful movements of this bird in the air, and its habit of hovering as if suspended by a thread, make it one of the best-known and most easily recognised of all the Hawks. It is a most charming bird to watch, as it flies slowly along against the wind some twenty yards or so above the ground, its head moving from side to side as it eagerly scans the ground for its favourite prey. Suddenly it stops and hovers;—no! too late, the mouse has darted into its hole;—so off it moves again with a few beats of its wings, and skims slowly along with wings and tail spread out, describing a great circle in the air as it wheels round the end of the field and comes back again, regularly beating the ground. Ah! there's something, he is hovering; suddenly he closes his wings and drops like a stone, opening them just as he reaches the ground, and, clutching the unfortunate mouse in his claws, he carries it off in rapid flight to some branch where he can tear it to pieces at his leisure.

A favourite performance of the Kestrel is the sailing about at a great height, often seen during the pairing season in April, when several of these birds may be noticed chasing each other in the air in huge circles, sometimes

darting down into the trees or soaring round and round, crossing and recrossing each other, and waking the echoes of the woods with their peculiar laughing cries, '*kee-kee-kee, heeie, heeie.*'

The food of the Kestrel consists chiefly of mice, frogs, voles, and large beetles, and it may often be seen chasing the latter in the air during the summer evenings. It also varies its diet with caterpillars, worms, and such like, and if very hard pressed for food will occasionally take small birds. This, apparently, is not a usual thing, as the little songsters are not the least afraid of him, and do not flutter into the thickest cover they can find with cries of alarm, as they do on the approach of the Sparrow Hawk.

The Kestrel is not a very early breeder, eggs being very seldom found before the second week in May. The nest is generally found in thick woods, and not in single trees, and an old crow's or a magpie's nest is usually chosen in which to deposit the eggs, the lining of wool or roots being commonly torn out, and little bits of earth broken up and pressed flat substituted; as incubation goes on, the pellets from the bird's stomach accumulate and form a beautifully soft lining. The Kestrel is also very partial to ledges on cliffs, or holes in old buildings, or crevices in rocks, in which to deposit its eggs. In such situations the eggs are usually laid in a hollow scraped in the soft soil, which is soon smoothed flat by the birds' feet. Occasionally an old raven's nest is chosen, and the Kestrel will sometimes nest in ivy-covered towers in company with Jackdaws. During the vole plague in Tweedsmuir in 1892-93, I found several Kestrels' nests on the top of turf-covered dykes or sheepfolds, and one on the ground beside a large boulder, the eggs being laid on the bare peat.

From four to seven eggs are laid, though six is perhaps the number most commonly met with. The ground-colour may be any shade, from a dirty white to yellowish chestnut or a rich brick-red, blotched, spotted, mottled, and streaked with various shades of brown. When newly laid they often have a delicate pinkish bloom, which, however, disappears after they are blown. They vary from 1.7 to 1.5 inch in length, and from 1.3 to 1.1 inch in breadth.

The female often begins to sit as soon as the first egg is laid, and the others are not always deposited at regular intervals; consequently it is no uncommon thing to find both eggs and young in the same nest. Newly hatched chicks are covered with a whitish down. The male is often to be seen in the vicinity of the nest, soaring above it at a great height in the air.

## PLATE I

### KESTREL. *Falco tinnunculus*

*May 31st, 1894.*—The nest from which this Plate was taken was in a small wood on the side of a steep hill in the valley of the Tweed near Broughton.

It was placed in the very top of a Scotch fir in a very thick part of the wood, and had evidently once been the property of some crow. Most of the woolly lining had, however, been torn out and a new one formed by the refuse pellets, on which the five eggs lay. They had evidently been laid some time, as the old bird sat very close, and only left the nest as I reached it. The male was circling round and round above the nest at a great height in the air, occasionally uttering his curious laughing cry.

I had some difficulty in getting my camera fixed up in the neighbouring tree so that I could see the eggs, as the tree the nest was in was much the tallest in that part of the wood. However, after some trouble I succeeded in rigging up a scaffold with a couple of dead branches and some string, and with much careful balancing among the thin branches I contrived to get two fairly good photographs of it.





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KESTREL. *Falco tinnunculus.*

$\frac{1}{4}$  NATURAL SIZE.



# WHEATEAR

## *Saxicola œnanthe*



THE Wheatear is a common and widely distributed summer visitor to the British Islands. It is one of the first migrants to arrive in spring, often before the snow is off the ground. Its breeding-haunts are, as a rule, confined to the wild moorland districts and waste ground. In England it is not a common bird in the southern and western counties, but becomes more widely distributed north of Derbyshire.

In Scotland it is one of the commonest birds to be met with, especially in the wilder districts, and breeds in most of the outlying islands, including the Orkneys, Shetlands, and the Outer Hebrides. It is also found in all suitable localities in Ireland.

The summer haunts of the Wheatear are among the wildest and most picturesque districts in our Islands. Hardly any place is too bleak or too wild for the Wheatear. On the waste ground near the coast, whether it be sandy links, gravelly beach, or rocky cliffs, the Wheatear is there. It is just as common a bird in the wildest parts of the Highlands—far up the glen, where the track winds round the shore of some lonely loch—as on the shoulders of the grassy Lowland hills, where it may be seen perched on some isolated stone uttering its cheery '*chick-chack-chack*.' Even the wildest islands on the west coast are usually occupied by pairs of these birds. The Wheatear is commonly to be seen on the walls and stones or fences along the roadside, where the track crosses some barer part of the moor or waste ground. He is not easily mistaken, with his grey white and black plumage and his cheery call, and his mate is usually not far off. As you come along he flies away a short distance before you, and alights again on some stone or fence post. Its flight is somewhat jerky and taken by fits and starts, and it usually jerks its tail once or twice as it alights, every now and then making

a little curtsy, and repeating its monotonous note. It is not at all a shy bird, and will go along a wall just in front of you for a long distance, dipping behind the wall and re-appearing again on the top a little way off, making a *détour* at last, and flying back to its favourite perch, which is usually not far from the nest. Though it does not as a rule perch on bushes or trees, it may often be seen on the top of some tuft of heather, balancing itself by graceful motions of the tail. The song of the Wheatear is a short but very sweet little performance, and is generally heard soon after its arrival at its breeding-haunts. It is often uttered as the bird flutters in the air above its perch, and sometimes when sitting on the top of some wall or stone.

The food of the Wheatear is chiefly composed of insects, snails, worms, grubs, and beetles, and, in common with nearly all insectivorous birds, it subsists largely on small ground-berries during the fruit season. It may often be seen perched like a fly-catcher on some prominent stone or fence post, taking short flights after the passing insects, returning again to its old perch.

The nest of the Wheatear is an extremely difficult one to find, from the nature of the site chosen. In some hole under a loose boulder or crevice in a wall, under some loose sod, or in a rabbit-hole, or among the loose stones of some cairn, are situations in which the nest is often placed. I have also often seen it in the peat-stacks beside shepherds' cottages. The nest may be any distance from the mouth of the hole, from a few inches to five or six feet. It is a rather loosely built, flimsy structure of dry grass, small roots, and moss, lined with fine grass and straw, and sometimes with feathers. When the nest is in a rabbit-hole there is usually a good deal of rabbit's fur used in the lining of the nest, and in some localities sheep's wool takes the place of the other materials.

The eggs laid vary in number from four to seven, though six is the usual clutch found. They are pale greenish blue in colour, generally quite spotless, though some specimens have very faint purple spots on the large end of the egg. They are long shaped, and vary from .95 to .80 inch in length, and from .65 to .60 inch in breadth.

The young birds are carefully looked after by their parents for some time after leaving the nest, and great is the anxiety of the old birds if the intruders venture too near. They will fly round and round his head with their curious jerky flight, uttering their plaintive notes incessantly, while the young ones will crouch among the heather, or hide amongst the stones beside the little stream.

## PLATE I

### WHEATEAR. *Saxicola ænanthe*

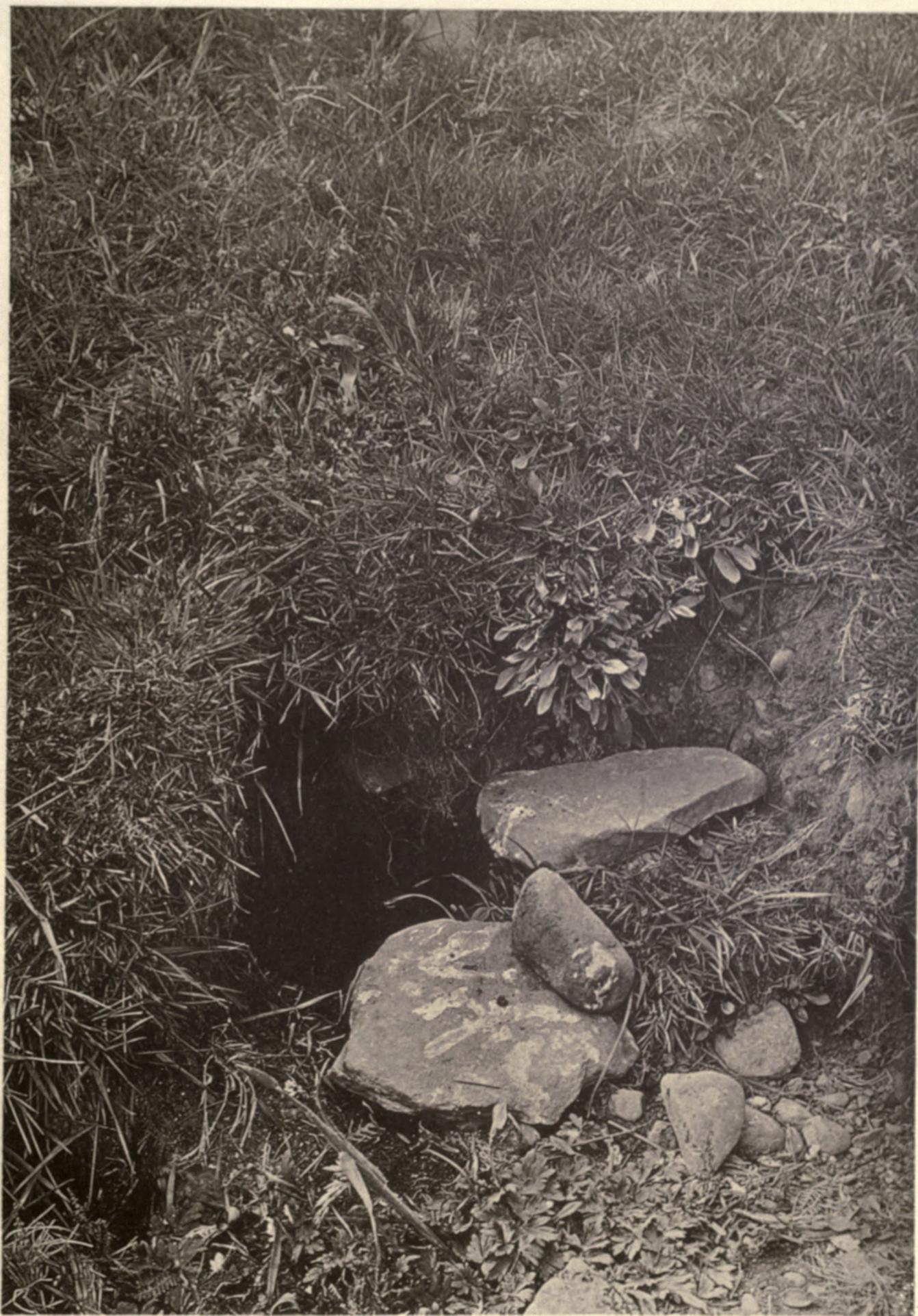
*May 31st, 1893.*—After examining many sites of Wheatears' nests, I decided to reproduce this one, as it gives a very good idea of the usual place selected as a nesting site.

The nest was placed in a disused rabbit-burrow, and was fully three feet from the mouth of the hole. It contained five fully fledged young birds. We spent a long time observing the old birds from some distance with our glasses, and watched a good many holes before we located the nest. The old birds were most careful in approaching the nest; but at last I saw the male go into the hole with a large moth in his bill, and on going up I discovered the nest. All the time I was engaged in photographing the mouth of the hole, the old birds flew in circles above our heads uttering a plaintive note, as well as their '*click-clack*,' which is rather like the sound made by striking two stones together.

We came across several Wheatears' nests during the course of the day, in various different holes and crannies under boulders, and I photographed two or three of them, but none of them were as good as the one in the Plate. The nest in this case was made of dry grass and wool, with a beautiful lining of pine root-fibres. Shortly after we left the nest we saw two of the young birds sitting on the stones at the mouth of the hole, where the old birds brought insects and other food to them.

In Tweedsmuir, where the Wheatear is exceptionally plentiful, I found a great many nests under the sods beside the open sheep-drains, especially where two sods leaned against each other and formed a sort of small tunnel; one entrance to the nest was usually choked up with grass and moss, the other being artificially widened or scraped out by the birds. As a rule they do not make a hole for themselves, but select a suitable natural one.





WHEATEAR. *Saxicola ananthe*.



## PLATE II

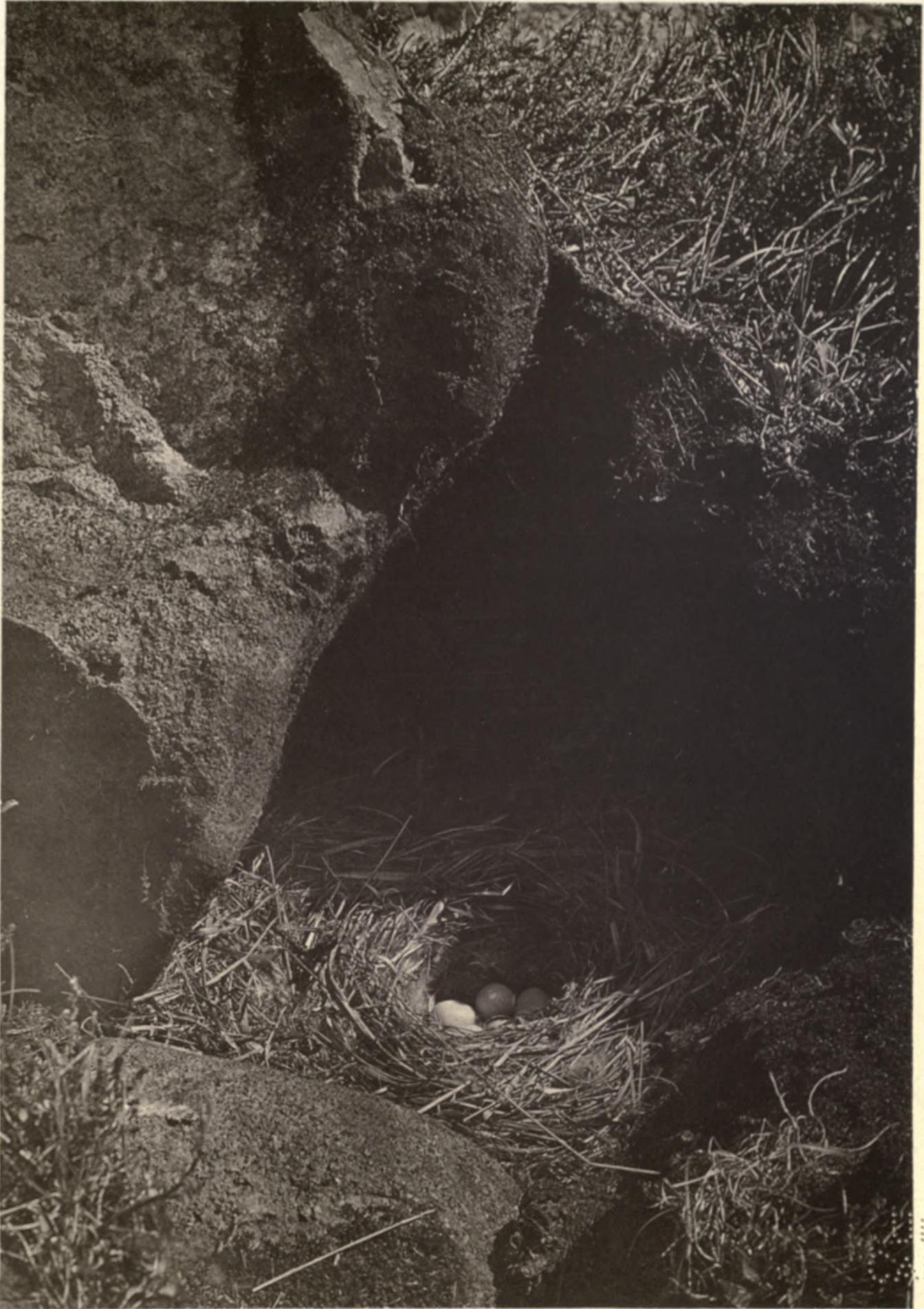
### WHEATEAR. *Saxicola ænanthe*

*May 20th, 1896.*—The nest depicted in this Plate was under a large stone beside the stalker's path up Glen More, Isle of Mull. I was going up the Glen with the keeper to photograph one of the eagles' nests on Lochbuie estate, when the Wheatear flew out from under the stone; it was such a simple matter to raise the stone that I took a photograph of the nest, which was a very typical one. The whole nest was entirely constructed of dry moor-grass, the coarser grass being used for the outside and the very fine stuff as a lining.

The birds were in a dreadful state of anxiety all the time we were at the nest, and flew round and round us, calling incessantly with their loud clacking note.

The Wheatear is very common on all the islands on the west coast of Scotland. I saw its nest on most of the Garvelloch group, on Iona, and its attached group, the Soa Islands; also on the Treshnish Islands, where I found no less than five nests on Lunga Island, and saw many of the birds on all the others. One nest on the Dutchman's Cap was under a stone, right in the middle of a large colony of Puffins, and under the same stone was a burrow occupied by one of these comical-looking little birds.





WHEATEAR. *Saxicola ananthe*.

$\frac{1}{2}$  NATURAL SIZE.

PLATE II.

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# WHITETHROAT

## *Sylvia cinerea*



THE Whitethroat is one of the best known of the Warblers, and is pretty generally distributed in all suitable localities throughout the British Islands, becoming somewhat rarer and more local in the extreme north of Scotland. It is also found on some of the Inner Hebrides, and is a straggler to the Orkneys and Shetlands.

The Whitethroat is essentially a bird of the thicket, and loves the thickly tangled hedgerows, or the bushes and undergrowth overgrown with bindweed or choked with long grass. It is, however, not very partial to woods, but is usually found in lanes, by the roadside or on the outskirts of plantations; a favourite place is on the patches of waste land which are overgrown with briars, nettles, foxgloves and brambles. It is a very restless, active little bird, hopping quickly about from twig to twig, and generally keeping pretty well out of sight, as it works its way along some thick hedgerow. Soon after his arrival in this country the male Whitethroat commences to sing; and a very bold little songster he is too, allowing the observer to approach within quite a short distance, as he sits on the top of some spray on the hedge and pours forth his song, the feathers on his head erected and his throat quivering with the exertion. The song is rather monotonous, the same notes being many times repeated, but it is very sweet in tone. In early summer the males sing almost incessantly the whole day, sometimes taking little song-flights, or resting on some conspicuous twig. When the male and female are chasing each other about among the branches they have a low soft note which is incessantly repeated, and may be represented by the syllables '*hweet-hweet-hweet*' uttered rapidly. The alarm-note is a sort of hissing sound, something like '*chzzzz*'.

The food of the Whitethroat consists principally of insects of various kinds, which it may often be seen chasing in the air or picking from the

leaves ; small caterpillars are also a welcome addition to its fare. During the fruit season the Whitethroat may often be seen in our gardens regaling itself upon the currants and raspberries ; it also eats the small wild fruits found in the woods and thickets. About the beginning of May the Whitethroats have all paired and are on the look-out for a nesting-site ; this is usually in some thick piece of tangle, some bush overgrown with bindweed, or the bottom of some dense hedge, among brambles and briers. It is a rather slight, loosely built structure, and so thin that one can generally see through it ; it is usually built of fine grass-stems and tiny roots, and is generally lined with rootlets ; it has often a little wool round the outside of the nest, woven in among the grass that forms the edge of the nest. It is usually rather deeper than is common with the nests of birds of this genus, and may generally be distinguished from them by this peculiarity ; it is a very pretty, daintily placed structure, hanging, as a rule, like some piece of network among the stems of the tall weeds, or perched among the branches of some thick, tangled bush.

The eggs laid vary in number from four to six. There are three distinct types of eggs. The first is pale green in ground-colour, somewhat sparingly marked with olive-green spots and a few very dark brown specks of colour ; the second has the ground-colour buffish white, and most of the spots are underlying and of a pale purple grey colour ; the third type, to which usually belong the handsomest eggs, has the ground-colour pale bluish white, blotched, spotted, or mottled with yellowish brown or olive markings, with large underlying spots of violet grey and a few almost black specks of colour. Some specimens are much more handsomely marked than others, and there is a great variation in the character and placing of the markings. In some eggs the spots are nearly all at the large end, and are confluent, forming a large blotch of colour ; on others they form a zone round the egg, or are evenly distributed over the whole surface ; while again on some specimens the spots are so faint as to be almost invisible. They vary from .80 to .70 inch in length, and from .65 to .50 inch in breadth.

The birds are very careful of their treasure, and betray great anxiety should the intruder come too close, sitting on some spray with their heads down and tails up in the air, scolding vigorously, and hissing like a cat, or hopping restlessly about the twigs, uttering their curious alarm-note '*chzzz-chzzz-cha-cha.*' The young birds are fed principally on small caterpillars and insects of various kinds, and are tended by their parents for some time after they have left the nest. The Whitethroat does not leave our shores till late in September or the beginning of October, and generally performs its migration at night.

## PLATE I

### WHITETHROAT. *Sylvia cinerea*

*May 30th, 1895.*—The nest from which this Plate is taken was built among the stems of the meadow-sweet and various other plants in a small thicket beside the river Leny at Callander.

In this one small patch of willows and briers I found no less than eleven Whitethroats' nests, all containing eggs. The place simply swarmed with the birds, and their noisy song arose incessantly from every bush; many of the nests, like the one in the Plate, were almost on the ground, among the leaves of the meadow-sweet and other weeds, which grew in great luxuriance among the tangle of willow-scrub and briers. Other nests were placed among the twigs of the willow bushes, usually when some tall plant grew up through them and formed a leafy screen to shelter and conceal the nest.

In only one nest did I find young birds, and they were evidently but newly hatched; little bare pink creatures with tufts of down on the tops of their bald heads; they eagerly opened their yellow mouths and gaped for food, swaying their heavy heads about as if they could hardly support the weight of them on their unsteady little necks. While I was looking at this nest the old birds frequently came within a few feet of me, scolding as vigorously as they could with a mouthful of insects.

After watching the birds for some time at their nests, I found that the sitting bird usually leaves the nest for about an hour shortly after mid-day, and for a short time at sunset; otherwise she sits very close, and displays tremendous anxiety if the intruder approaches too close to her treasure, hopping about among the bushes and scolding vigorously. I have observed the male clinging to the rough bark of the birches and searching in the crevices for insects, just like the Creeper, or chasing the insects in the air, stopping with a sort of jerk every now and then, and hovering with his tail expanded.





WHITETHROAT. *Sylvia cinerea*.

$\frac{1}{2}$  NATURAL SIZE.

UNIV. OF  
ALBANY



# SOLAN GOOSE

## *Sula Bassana*



THE Gannet is a resident along the shores of the British Islands, but its colonies are very sparingly distributed; they are seven in number, of which five are off the coast of Scotland, one in Ireland, and one in England.

It is a bird of extremely powerful flight, and lives almost exclusively in the air; it does not remain long sitting on the water, except when sleeping. It may often be seen at a great height soaring in the air without a movement of its extended wings, wheeling round and round, generally above the water, as it is seldom seen inland. A flock of these birds is most interesting to watch, especially if they are following some shoal of fish. They soar in wide circles, crossing and recrossing each other, often at a considerable height in the air; every now and then one dives with a loud splash into the water and reappears with a fish, which it speedily swallows whole, and, rising from the water, returns to join the flock wheeling above. These flocks follow the shoals of fish to great distances, and frequently fly more than a hundred miles during the day to feed.

The food of the Gannet is exclusively composed of fish, which it usually catches by dropping down upon them from a considerable height in the air, herrings being its favourite food in our seas. It is a very greedy bird, and being blessed with a good and very rapid digestion, is always on the look-out for more, like the fat boy in *Pickwick*, very often eating so largely that it is unable to rise from the water, where it floats to sleep off the effects of its gluttony.

The Gannet breeds in large colonies on some towering ocean rock. Some of these colonies are enormously large, such as the one on Sulisgeir or Sulisker, north of Lewis, which is estimated at 150,000 pairs. The eggs are usually laid in May, and I quote the following description of a visit to the Bass Rock from my Journal:—

*June 8th, 1893.*—Drove to Canty Bay Hotel, and found our boat, which we had ordered the day before, all ready for us. We were for some time completely out of sight of land on the way across, as a dense mist lay on the surface of the water. We saw many Gannets diving from a great height for herrings and small whiting, some of them catching fish quite close to the boat. The landing-place was easily negotiated, as it was fairly calm; from this point one would scarcely suppose that such an interesting scene was on view close at hand, the only birds visible being a few Puffins sitting at their holes in the old buildings. We got up to the top of the rock, B. M. going to the right and myself to the left, each with our respective cameras and attendants.

‘My first view of this great colony of Gannets was from the summit of the cliff beside a deep gorge running into the Rock. For some distance the whole cliff opposite was completely whitewashed with the droppings of the birds, and I could see hundreds of them sitting on their nests, while a continuous stream of birds passed my feet going and coming from the nests. I roughly estimated this branch of the colony at one thousand pairs. The whole air was filled with the rush of wings and the noise of Gannets at their nests; every available ledge or point of rock had a nest on it,—large, evil-smelling collections of bits of turf and seaweed, with a few straws, bits of paper, feathers, or even bits of driftwood, in them. The offensive smell was chiefly due to the numerous decaying fish which lay about, both in the nests and on the ledges beside them.

‘Some of the spots chosen for nests seemed to be very awkward, the birds having to make three or four attempts before being able to land. The Gannet is at all times a most clumsy bird at alighting on its nest, often tumbling about in the most absurd way. On reaching the nests the birds often ejected from their pouches two, sometimes even three, large herrings, generally headless, which no doubt the sitting bird eats, as we only saw two young birds on the Rock. I noticed many of the birds land plump in the nest with one foot on the top of the egg, and sit that way for some time. On being approached they were most pugnacious, opening their bills and emitting the most startling sounds. I photographed this great cliff-face, covered with Gannets; and far below, hundreds of Kittiwakes and Guillemots were sitting on their nests, some of them even finding vacant ledges among the Gannets.

‘I then walked round the top of the cliffs to a place where a careful climber with a good head can with care descend some way down the face of the cliff right amongst the nests. Here I saw hundreds and thousands of

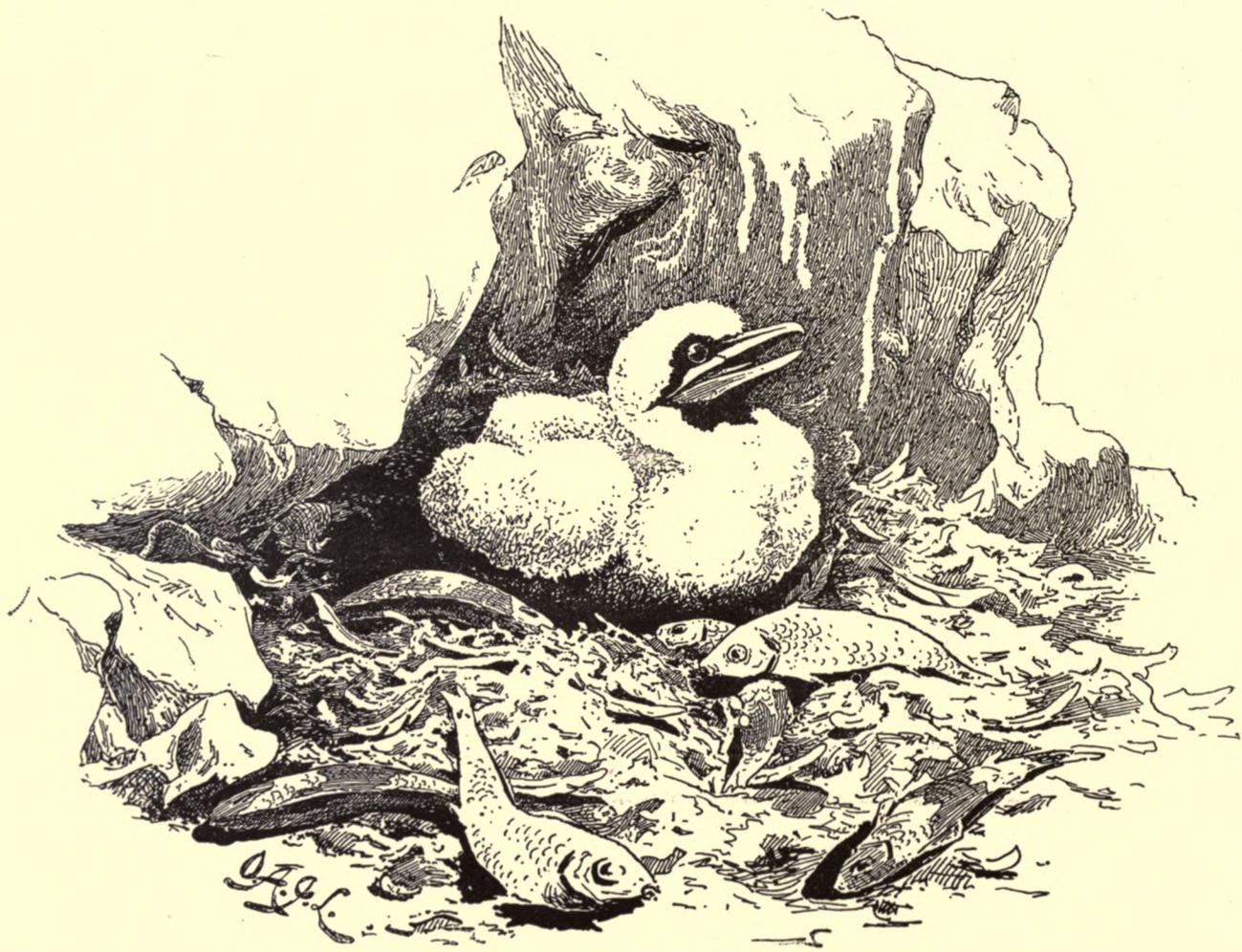
Gannets, many within a foot or two of me. I set up my camera and waited for the return of the birds, which had quitted their nests on my approach. In a few minutes they returned one after another, flopping down on to their nests in a most ridiculously clumsy manner. I sat and watched them for a little while, after taking two photographs.

'The din at this point was most awful; the nests being very close together, hardly a bird landed without violent altercation with its neighbour, generally resulting in a fight, while the others round commented loudly on the set-to and backed their favourite: it often ended in both falling over and recovering themselves some way down in the air. I noticed that whenever a bird left the Rock it kept wagging its tail for the first few seconds, as if settling its ruffled plumage. We saw several Gannets with immature plumage sitting on nests, but the most of the immature birds simply sat about the rocks, or spent their time in fishing and sleeping.'

The Gannet only lays one egg, which is thickly coated all over with a chalky substance, which, on being scraped away, reveals a greenish shell beneath. They vary a good deal in size, but are generally rather oval in shape, and vary in length from 3·4 to 2·7 inches, and from 2·2 to 1·8 inches in breadth. They are always much broader than the eggs of the Cormorant.

Newly hatched young are quite naked and dark slate-grey in colour, but are soon covered with a thick pure white down.





## PLATE I

### SOLAN GOOSE. *Sula Bassana*

*June 7th, 1895.*—This Plate was taken far down the East Cliff on the Bass Rock. I climbed right down, with my camera on my back, having left my shoes and stockings on the top, as the rocks were so slippery that nails were no use at all, and might have caused a dangerous slip. I succeeded in getting right down among the birds, and got two very good plates of them.

Most of the nests seemed to be repaired each year, as some of them were enormous structures of seaweed, evidently years old. I would recommend the adventurous climber never to trust to a foothold in a nest, as I had a narrow escape on this occasion owing to doing that. The nest happened to be built on a slightly sloping piece of rock, and being soaked with wet and slippery with decaying fish, simply shot out into space the instant that my foot rested on it; fortunately I had a good grip of the rock above, else I had then and there ended my career, as there was a fall of two hundred feet on to sharp, jagged rocks below.

I climbed to a most curious place far down the face of the cliff,—a huge vertical cranny, from which I looked down on to a ledge covered with Gannets and a great many Guillemots sitting on their single eggs.

The note of the Gannet is a curious sound, midway between a croak and a laugh, and very harsh and guttural. They will open their bills and utter the most blood-curdling noises if approached, and woe betide any unfortunate finger that gets nipped by their powerful bills. I remember our gamekeeper bringing home one which had been left behind by a storm on the hills in South Perthshire. It was put into an empty poultry-pen for the night, and going rather too close to it on my visit next morning, I received a painful reminder from its powerful bill.





SOLAN GOOSE. *Sula bassana.*

Plate I.

UNIV.  
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## PLATE II

### SOLAN GOOSE. *Sula Bassana*

*June 7th, 1895.*—This Plate was taken from a single bird on the face of the East Cliff. The camera was set up only five feet from the bird, and it sat quite unconsciously on its nest, with its plumage puffed out as if it enjoyed having its portrait taken.

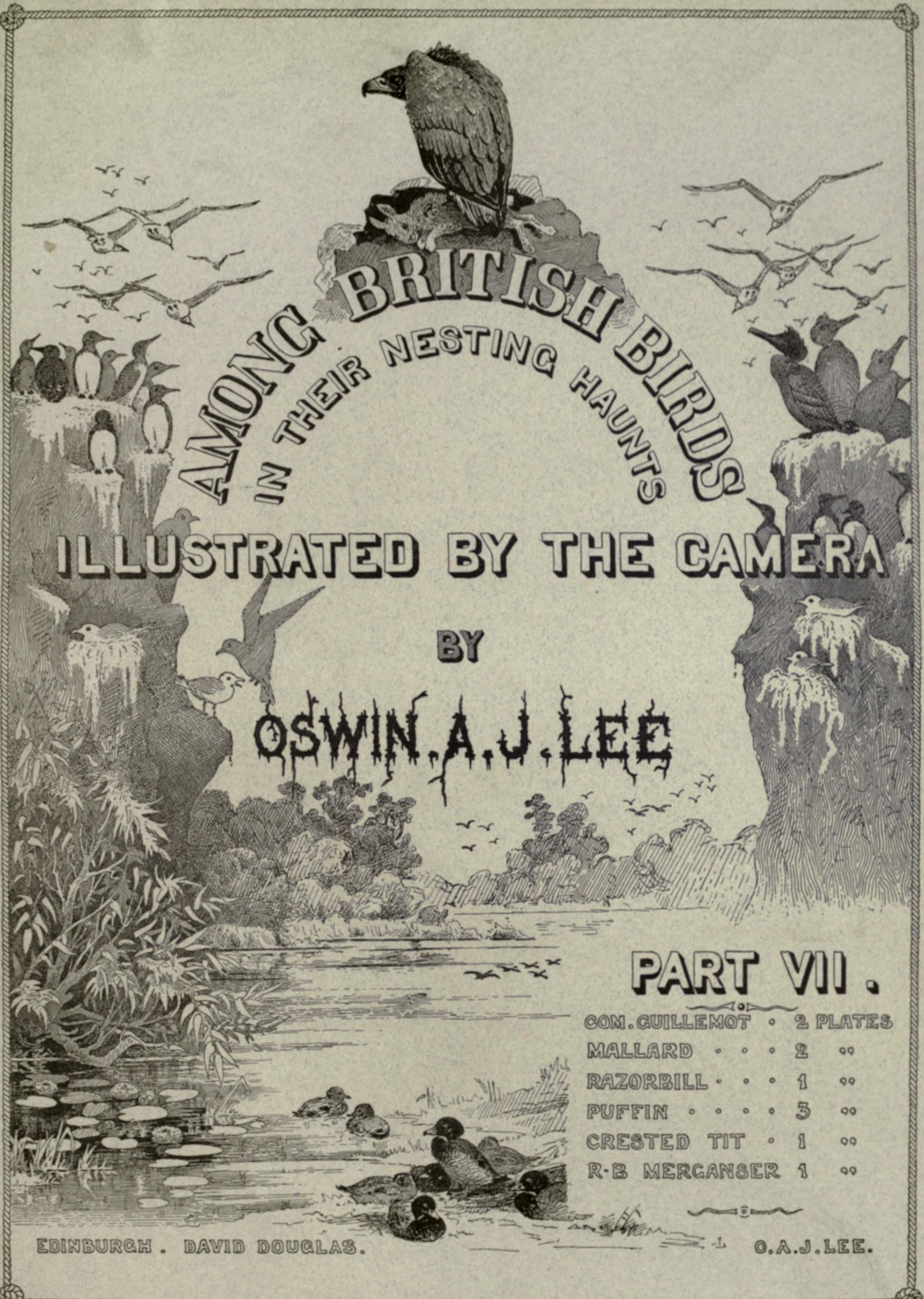




SOLAN GOOSE. *Sula bassana*.

$\frac{1}{4}$  NATURAL SIZE.





**AMONG BRITISH BIRDS**  
IN THEIR NESTING HAUNTS

**ILLUSTRATED BY THE CAMERA**

**BY**

**OSWIN A. J. LEE**

**PART VII.**

COM. GUILLEMOT	•	2	PLATES
MALLARD	• • •	2	“
RAZORBILL	• • •	1	“
PUFFIN	• • • •	3	“
CRESTED TIT	•	1	“
R-B Merganser	1	“	







# COMMON GUILLEMOT

## *Uria troile*



THE Guillemot frequents the open sea during the greater part of the year, sleeping on the water at night, and during the day diving after the shoals of the small fish on which it feeds. It is a wandering species, and often strays hundreds of miles from its breeding-haunts. Though a plain-looking, simply-plumaged bird, the Guillemot is perhaps the most interesting of all our sea-birds during the breeding season. It is a widely distributed species, and breeds on most of the sea-coasts of Great Britain where bold rocky cliffs and headlands or steep rocky islands are found.

The Guillemot is a very clever diver, and can generally escape a shot fired at it when sitting on the water by diving at the flash of the gun. Its food consists almost entirely of small fish, generally herring fry, but it will also eat shell-fish, crustaceans, and sea insects. Off the Farne Islands the Guillemot may be seen in thousands following some shoal of tiny herrings, and it is extraordinary to watch the evolutions of the dense crowd, more than a third of which is usually under water at a time. They make a wonderfully attractive picture, with their black and white plumage gleaming in the sun against the dark green of the sea, rising and falling on the waves, sometimes sitting up and flapping their wings, but ever following the shoal of fry and busily diving after them. The Guillemot usually arrives on the surface of the water with its prey held across the middle in its bill; then stretching up its neck, it turns the fish and swallows it head first. They travel immense distances to their feeding-grounds in the early mornings, and at sunset during the breeding season they may be seen flying in long strings at a tremendous pace just above the waves, making for their nesting-station.

The Guillemot is a very silent bird on the water, only an occasional

hoarse guttural note being heard; but at its breeding-place on 'The Pinnacles' at the Farnes a perfect Babel of sounds may be heard. When an intruder appears on the cliff-top opposite, all the Guillemots seem to be talking at once, and their curious note, a guttural 'grrrr,' seems to rise and fall in chromatic scales, as it swells and dies away.

One of the most accessible breeding-stations, and at the same time one which affords the finest opportunity of observing the Guillemot at close quarters, is that on the Farne Islands. A row of tall whitewashed rocks, called 'The Pinnacles,' stands some twenty yards distant from the adjoining island. They rise sheer from the water—some fifty feet in height at half tide—and are perfectly flat on the top, which, like most of the sides, is completely whitewashed with the droppings of the birds. A dense mass of Guillemots occupies every available inch on the top of these 'Pinnacles.' So tightly packed are they that birds may be seen with flapping wings settling on the backs of their neighbours, endeavouring to find sufficient space of rock to sit on. Every now and again one may be seen elbowing his way to the edge of the cliff, from which he takes a header into the sea with wings, legs, and tail outspread.

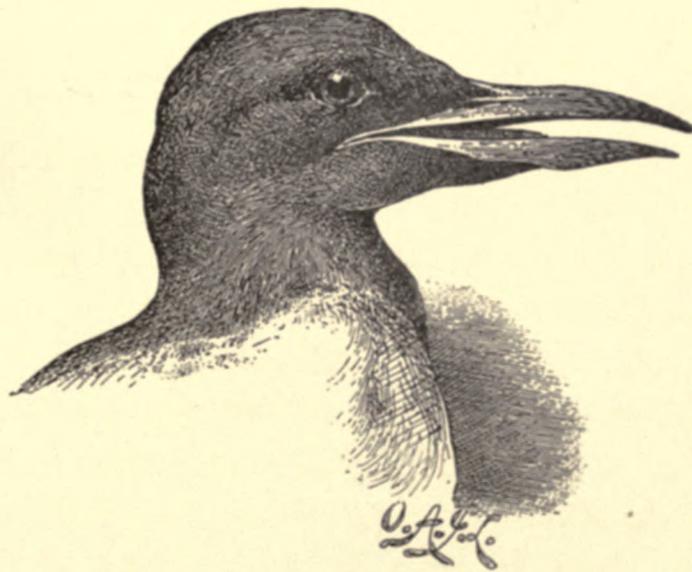
On the top of these 'Pinnacles' the eggs are laid without the slightest vestige of a nest, the old birds sitting stride-legs on them and perfectly upright, with their backs to the edge of the cliff, so as to show the least conspicuous part of their plumage. On the Bass Rock most of the Guillemots lay their eggs on the ledge near the base of the cliff, but numbers may be found almost at the top, some three hundred feet above the water.

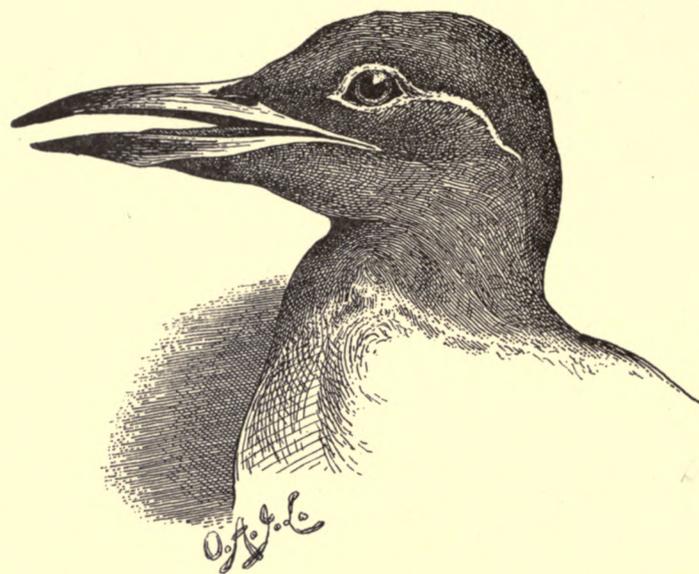
The Guillemot lays only one egg, which is enormously large in proportion to the size of the bird. It would be wellnigh impossible to describe all the innumerable variations of colour and markings which may be found among the eggs of the Guillemot; the ground-colour may be white, or any shade of cream, red, brown, brown-purple, olive, deep green or bluish green, and almost any intermediate colour. They are blotched, spotted, and streaked, or covered with curious writing-like scrawlings of browns, rich reddish purples, pinks, greys or black, sometimes being without any markings at all, or with one huge, irregular blotch covering nearly a quarter of the entire surface. They vary in size from 3·6 to 3·0 inches in length, and from 2·1 to 1·8 inch in breadth. Very small eggs are occasionally met with, not bigger than that of a bantam, but they usually have a very thick shell and no yolk, and rarely, if ever, hatch.

When the young are hatched, the momentous question arises, How do they

get safely down to the water? At 'The Pinnacles' on the Farnes, where one can sit comfortably within thirty yards of the birds, I have seen the fond parents resort to the simple device of shoving them over the cliff, and apparently the young birds are not much the worse; but though I have patiently watched these for some time on several occasions, I have never seen one carried down by the old birds, though such is said to be the method usually employed. 'The Pinnacles' are only some fifty feet high, and quite perpendicular from the water, consequently the method of shoving the young birds over is fairly safe; but this is absolutely out of the question on the Bass Rock and in similar places, where the cliff is not perpendicular, and where many of the Guillemot ledges are two, or even three, hundred feet above the water. I have, however, repeatedly seen young Guillemots, almost fully fledged, on the higher ledges of the Bass, and probably in situations such as these the young do not leave the ledges until they can fly sufficiently well to accomplish the descent in safety.

Young in down are brownish black on the upper parts and greyish white below.





## PLATE I

### COMMON GUILLEMOT. *Uria troile*

*June 4th, 1895.*—This Plate is from a photograph of the south stack of 'The Pinnacles' on the Farne Islands. This stack is absolutely crowded with Guillemots, some of them having to be contented with the tiny ledges on the face of the rock which are not already occupied by the Kittiwakes. It is a very difficult thing to get a satisfactory photo of the Guillemots here, as they are never still for an instant, and seem to spend the whole day bobbing their heads up and down and flapping their short wings; the exposure has therefore to be absolutely instantaneous, to the detriment of the darker parts of the rocks. It was very amusing to see the incoming birds landing on the shoulders of their neighbours and elbowing their way to their own places.

There was a continuous stream of birds going and coming to this rock, so we supposed that some of the birds had young, as many of them brought small fish in their bills; but we were quite unable to see either an egg or a young bird, even with the aid of a powerful glass, as the birds were so tightly packed. We saw a good number of 'ringed' birds with the glass, but could not make out the percentage of them with any degree of accuracy.

Sometimes a Guillemot lays its egg on the ledges of the main island, but it is almost invariably destroyed at once by the Lesser Black-backed Gulls, as the bird has not the protection of the multitude of neighbours.

Very often a small flock of Guillemots would swim round between 'The Pinnacles' and the Island, diving after the small fish, and, standing as we were on the top of the cliff above them, we could distinctly see them going along under the water, using their wings as a means of progression, a thin stream of air-bubbles rising in their track. They very seldom came up again without a tiny fish held crosswise in their bills.





COMMON GUILLEMOT. *Uria trois*.

Plate I.

UNIV.  
CALIF.



## PLATE II

### COMMON GUILLEMOT. *Uria troile*

*June 7th, 1895.*—The single egg of the Guillemot depicted in this Plate was photographed on a slope of whitewashed rock far down on the north side of the Bass Rock, and was reached with great difficulty, a heavy camera being a serious impediment in climbing without a rope. At this part of the Bass Rock there is a large colony of Guillemots on flat ledges, two or three birds generally occupying the same ledge. These ledges are some two hundred feet above the sea.

The egg photographed was the only one I could get near enough to, to obtain a good result, as the rocks were wet and very slippery. The old bird allowed me to get within ten feet of her, but flew off when I was placing my camera. To any one who has witnessed the manner of the Guillemot's descent from its ledge to the sea, the idea of their carrying down their young must seem absurd; not only do they fly down in so perpendicular a path that no young bird could rest on their backs, but their legs and tail are both spread out for steering purposes, so that they could not be used for holding the young one.

I was much amused to see the careful way in which the old bird poked her egg between her legs on arriving from feeding, and settled herself for a quiet snooze with her head tucked into the feathers on her back. I watched several of the young birds being fed by the parents on the ledges below, only my head being visible to them. The old bird disgorged the fish half-digested on the ledge and fed the young one with small pieces, apparently ramming each piece well down with its bill, while the young one gurgled with satisfaction.





UNIV.  
CALIFOR

COMMON GUILLEMOT. *Uria troile.*

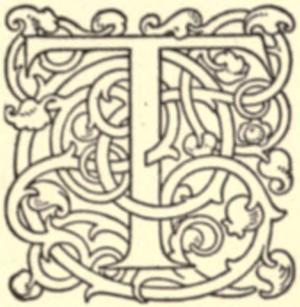
Plate II.

$\frac{3}{7}$  NATURAL SIZE.



# MALLARD

## *Anas boscas*



THE Mallard is the commonest, and during the breeding season the most widely distributed, of all the British ducks; and although most of our tame farmyard ducks are originally descended from the Mallard, no other of our wild ducks can surpass it in wariness or cunning.

During a hard winter the Mallard betakes itself to the springs and rapid streams, which it otherwise very seldom frequents, as it prefers to sleep on the water, and should these become frozen up, they will migrate to the nearest sea-coast, where they remain till thaw sets in, and they know that they can return to their accustomed haunts. During the severe winter of 1894-95 I saw immense flocks of Mallards on several parts of our coast, especially about the Farne Islands off Northumberland, some of which must have consisted of thousands of birds, as they formed quite a dense black cloud when they flew to their feeding-ground at sunset.

When disturbed on the water the Mallard rises in the air at once, and flies rapidly away—up wind for preference; they seldom dive unless wounded. Their flight is rapid and powerful, and each whistling stroke of their wings can be distinctly heard at some distance, especially on a calm night. When a pair of wild ducks are disturbed, the duck generally takes to her wings first, the drake following.

The food of the Mallard is very varied. It will greedily devour all kinds of animal life found in the water, and the shoots of most water-plants. On a wet day it may be seen catching the snails and earthworms in the fields; and often in the autumn it descends on the stubble-fields to pick up any grain which is left. The sides of its bill are provided with very sensitive *laminæ*, through which it sifts the mud, and retains anything eatable. Mallards will feed in this manner on the mud-flats in estuaries on the darkest nights,

and any one who has sat out to shoot wild-fowl in such places will have heard them guzzling in the mud all round him.

The Mallard is a very early breeder, and eggs may be found as early as the last week in March. The nest is seldom very close to the water, but is usually placed some way from it, on a dry bank among heather, rushes, or bracken. Sometimes it is placed in the edge of a wood among the undergrowth, or under a bush. More rarely it is found in a dead stump, or even in some disused nest in a tree! I have seen a nest of this species in the large hollow of a beech-tree eight feet from the ground; this bird nested regularly in the same situation year after year. The nest is usually a deepish hollow in the ground, carefully concealed among the long grass, heather, or brushwood, and copiously lined with moss, dry grass, and leaves. After the duck begins to sit, she plucks the down from her breast and sides, and adds it to the lining of the nest. By the time that the full complement of eggs is laid, the mass of down keeps the eggs quite warm while she leaves the nest to feed, and also serves as a covering to hide the eggs from the crows.

From seven to twelve eggs are laid, sometimes as many as fourteen, nine or ten being an average clutch. They are of a greenish buff colour, and vary in length from 2.45 to 2.15 inches, and in breadth from 1.71 to 1.49 inch. They are not very likely to be confused with those of any of our British-breeding ducks, as the down in the nest is always a sure identification. It is a neutral grey colour, faintly tinged with brown, slightly paler in the centre of the flakes, and faintly tipped with white.

Young in down are dark brown on the upper parts, with very pale buff spots on the scapulars, wings, and sides of the rump. They are pale brown on the under parts, shading into a lighter brown on the belly, and into pale buff on the throat. A dark brown stripe runs through the eye, a pale yellowish buff stripe over it, and the ear coverts are tipped with dark spots.

The Mallard leads her young to the nearest water as soon as they are hatched, and it is a very pretty sight to see an old duck swimming about with a long string of little ducklings following behind. Like the Eider, the Mallard will take her young on her back when they are tired, and swim with them to a place of safety. In lakes where large pike abound great numbers of young ducks, as well as the young of other water-fowl, are seized by these voracious fish. On St. Mary's Loch in Selkirkshire I killed a fine pike of nine pounds whose stomach contained a trout of three-quarters of a pound and two young Mallards, partially digested.

## PLATE I

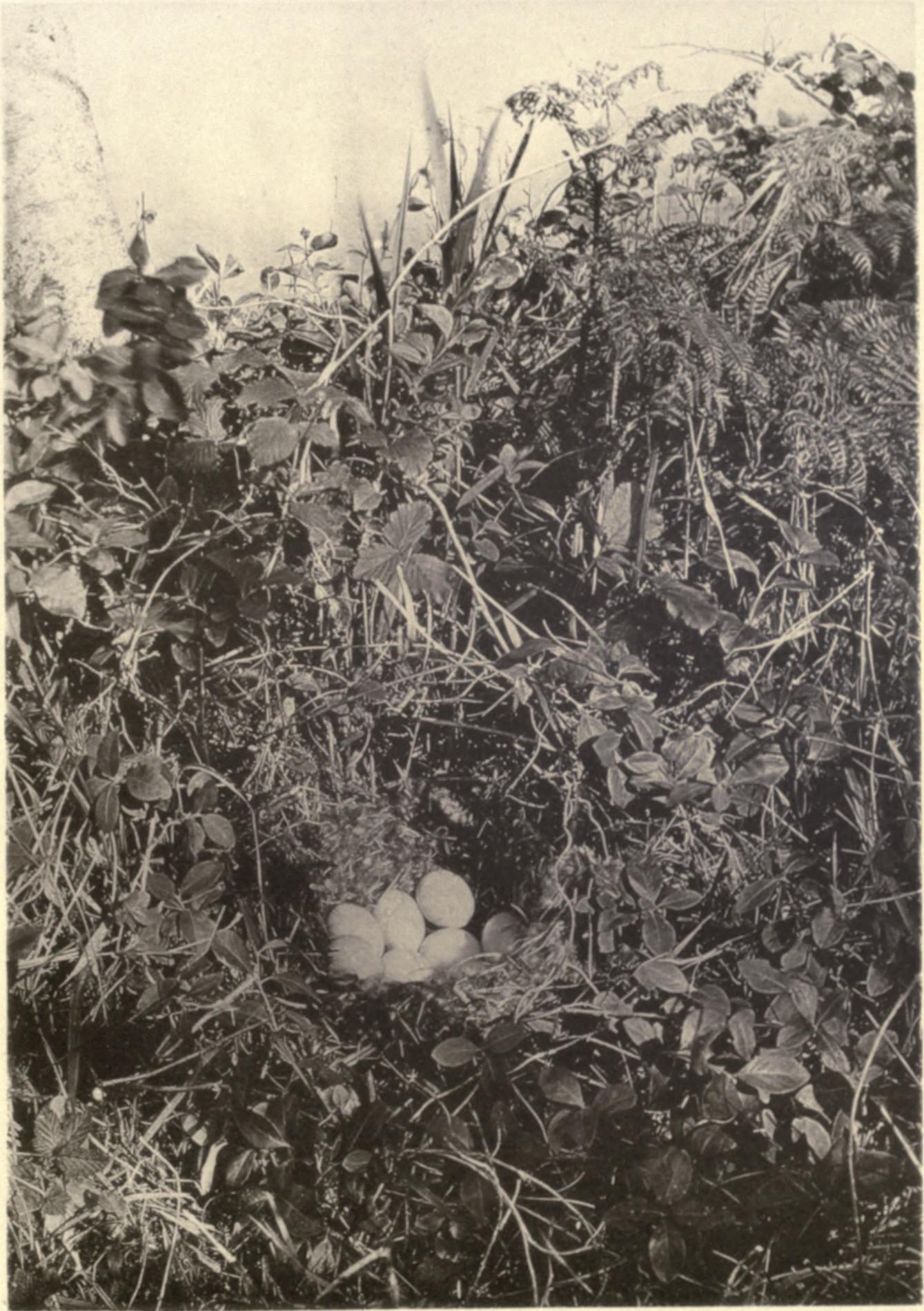
### MALLARD. *Anas boscas*

*May 1st, 1896.*—The nest from which this Plate is taken was built on a small rocky island on Loch Ard, Perthshire. It was very artfully concealed among some very rank, long heather, under a small Scotch fir-tree on the top of a rock, and was a mere hollow in the peaty soil, lined with a few bits of heather, small sticks, and a little down. The bird sat very close, and I got within a foot or two of her before she rose and flew hurriedly away.

This spot was usually occupied by a Red-breasted Merganser's nest, but on this occasion the Mallard had evidently been the first-comer. We waited about for some little time, fishing along the shore, but she did not return as long as we were there, though we saw the drake disporting himself in a little sheltered bay, splashing about in the water and preening his feathers.

The first eggs in this nest hatched out on the twenty-first day after I found it with five eggs, two of the nine eggs did not hatch out at all, and I found one young bird dead near the nest. I saw the duck with five young ones swimming near the island, so she must have lost another young bird somehow.





MALLARD. *Anas boschas.*

$\frac{1}{2}$  NATURAL SIZE.

Plate I.

UNIV. OF CALIFORNIA



## PLATE II

### MALLARD. *Anas boscas*

*June 16th, 1896.*—This nest was placed on a small island on Loch Uisg, Lochbuie, Mull. It was beautifully concealed among a tangle of brambles, reeds, grass, and wild honeysuckle, and was copiously lined with moss, little bits of grass, and a profusion of down. It contained twelve highly incubated eggs, which were hatched out successfully two days after I photographed them.

The Mallard was very tame on my first visit, and let me stand looking at her within a few feet. Unfortunately I had no camera with me, and when I returned next day to photograph it she had gone off to feed. The length of the period of incubation seems to vary slightly in different localities. This nest was hatched successfully on the twenty-eighth day, counting from the date the first egg was laid. I have records of several other nests successfully hatched out on the twenty-fourth day, and one of six eggs on the twenty-second day; but twenty-five days seems to be the average time for a nest of nine eggs from the date on which the first egg is laid.





MALLARD. *Anas boschas.*

$\frac{1}{2}$  NATURAL SIZE.

Plate II

UNIV. OF  
CALIFORNIA



# RAZORBILL

## *Alca torda*



THE Razorbill is a very common bird on most of the rocky parts of our coasts, and breeds on all suitable cliffs round the coasts of Great Britain and Ireland, and most of the adjacent islands. It is a resident throughout the year, and often strays to the low-lying coasts during winter, being occasionally blown inland during a heavy gale.

In its habits the Razorbill resembles the Guillemot, and generally feeds in company with this species. It is, however, easily distinguished from it by its much deeper bill and the conspicuous white stripe from the base of its bill to the eye. In winter the Razorbill does not appear to be so numerous as it is in summer; this is principally because it is much more widely spread, living chiefly out at sea. It is a very silent bird, both on the water and at its nesting-stations, only uttering a hard, guttural '*aarrk*' when suddenly disturbed from its single egg. It is most at home on the sea, and floats on the water as lightly as a cork, sleeping on the restless waves in perfect safety. It sits high in the water, with its head and neck held upright above its back, like the divers, and swims very fast when it cares to exert itself. Sometimes these birds may be seen chasing each other and splashing along the top of the water, diving suddenly when the pursuit gets hottest, and remaining quite a long time under the water. It is not a shy bird, and often allows the passing vessel to get within a few yards of it before it dives suddenly and swims rapidly away under water, leaving a tell-tale track of rising air-bubbles to mark the direction of its flight. On the Dutchman's Cap I spent a considerable time watching these birds; they did not fly about in wide circles like the Puffins, sweeping past their breeding-places again and again as these birds do, but flew straight

down to the sea when they left their nesting-ledges, and straight up to their nests again when they left the water. Their flight is performed by short quick strokes of their wings, which are somewhat small for the size of the bird; yet they can fly at a great speed, though they are clumsy at rising off the water, and generally splash along the surface for some distance before they get properly started.

The food of the Razorbill consists chiefly of small fish, principally small saithe and the fry of herrings, but they also devour large quantities of molluscs, crustaceans, etc. The bird is a marvellous diver, and catches its fish-food under water with great dexterity. From the top of some low cliffs on the Treshnish Islands, where the Razorbills are very plentiful, I lay and watched them catching the small fish among the tangle of seaweed some forty feet below me. They flew along under water as easily as they do in the air, only with much slower strokes of their wings, and apparently helped themselves along by paddling with their feet also. Whenever they succeeded in catching a fish they shut their wings and appeared on the surface with their prey held crosswise in their strong bills, turning it cleverly with a toss of the head and swallowing it head first. These birds fly immense distances to feed, returning in the evening to their nesting-sites, when they may be seen in little strings, generally in single file, flying swiftly along just above the surface of the water.

The Razorbill is rather late in commencing its nesting operations, eggs being seldom laid before the middle of May, and often not until the end of the month. They return year after year to the same crevice to lay their large single egg. I have two very richly coloured eggs before me as I write, which I took from a cranny near the top of the Bass Rock on two succeeding years. I was rather too late in going there in '96, and the egg was there, but so very highly incubated that it defied all my attempts to blow it. All these three eggs were exactly similar in character and colouring, though the actual spots were somewhat different in shape on each occasion. Thus it would seem that the Razorbill pairs for life. The Razorbill must have a cranny or hole in which to lay its egg, and in sites where these are plentiful great numbers of these birds breed in one large colony. The Guillemots usually nest lower down on the cliff on the open ledges, the Razorbills keeping near the top. On the Treshnish Islands—a group in the Inner Hebrides—I found a great many Razorbills' eggs in the mouths of deserted Puffin burrows on the edge of the cliff. Sometimes the egg is far in, in some crevice quite out of reach, while others are in slight holes only some few inches in depth, as

in the Plate annexed. Both birds take their turn in hatching the egg, incubation lasting from twenty-six to thirty days.

There is not nearly such a diversity of colouring among the eggs of the Razorbill as is to be found among those of the Guillemot, though there are many types and varieties of Razorbill's eggs. One remarkable difference is noticeable after they are blown: whereas those of the Guillemot when held up to the light look sometimes cream-coloured and sometimes green, through the hole the Razorbill's egg always looks green, although there be not the faintest trace of that colour on the surface. In ground-colour the Razorbill's eggs vary from white to pale reddish brown, sometimes with a very faint greenish tinge, but this is rare, and usually soon fades, leaving the shell pure white. The surface-markings are rich dark reddish brown, sometimes nearly black, and sometimes there are a few rich light chestnut marks. Underlying markings are pale grey or greyish brown, and have the same character as the surface marks, varying from huge blotches, which are usually on the large end of the egg, to very small specks. They vary in length from 3'20 to 3'75 inches, and in breadth from 2'0 to 1'72 inch.

Young in down are brownish black on the upper parts, and have greyish white under parts and a greyish forehead and throat.





## PLATE I

### RAZORBILL. *Alca torda*

*June 12th, 1896.*—The Razorbill's egg depicted in the Plate was the only one which I could get at to photograph on my visit to the Treshnish Islands, Inner Hebrides. On the Dutchman's Cap—one of the group—the eggs were for the most part laid in tiny crevices or hollows, made by some stone or boulder dropping out of the matrix of the amygdaloid formation of which the islands are composed; but in some places I saw many of them in crevices, in splits in the cliff, in deserted Puffin burrows, and a few on small overhung ledges.

I was very much surprised to see a male bird come in three times to a crevice and feed his sitting mate with small herring fry, as I had previously been under the impression that they left the nest to feed. That they do so also I had ample proof, as I saw a pair change, the male going on to the egg while the female flew off to the sea and splashed about in the water at no great distance. There were very few young birds hatched—indeed, I only saw two, though I visited all the cliffs on several of the islands.

On one ledge, under a huge mass of rock, I saw five Guillemots sitting on their eggs among a little colony of twenty-three Razorbills. I got within five yards of them, but was unable to procure a photograph, as I had no rope with me.





Univ.  
CALIFOR

RAZORBILL. *Alca torda*.

$\frac{2}{5}$  NATURAL SIZE.



# PUFFIN

## *Fratercula arctica*



THE Puffin is found in all localities suitable to its breeding habits round the entire coast-line of the British Islands, and is perhaps the best-known of all our sea-birds from its quaint appearance. It is most plentiful in rocky districts, and breeds in huge colonies on some of the western islands.

The Puffin is more or less resident in the British seas all the year round, but in winter it is much more seldom observed when scattered over the open sea, as it seldom goes near the land at that season. The Puffin is a gregarious bird, and in some situations its numbers are legion. The Shiant Islands are perhaps the largest Puffin colony in our islands. The custom is to fire a gun towards the face of the cliff or steep slope to raise the birds. At the sound of the gun the Puffins leave their burrows and fly down the face of the slope to the sea in hundreds of thousands. One writer likens it to a mass of shale slipping down a hillside; the air is filled with Puffins, flying wildly about in legions, crossing and recrossing each other, anon returning to their burrows as the alarm subsides. The Puffin is a good swimmer, sitting high in the water, and looking intensely comical with its large bill and curious expression of face. They dive with great dexterity, and usually prefer to seek safety by swimming away under water, which they do at a great speed, using their wings as easily under water as in the air, like their congeners the Guillemot and Razorbill. In spite of the very small, short wings with which Nature has endowed the Puffin, it is a rapid and powerful bird on the wing, rising from the water with ease. When a colony of birds are disturbed, they will often fly round and round in huge circles, passing and repassing their nesting-sites, and careering about in the air for twenty minutes at a time before they again alight and re-enter their

burrows. When an intruder approaches a colony of these birds, they will, as a rule, take wing long before he gets near; but let him stand still among the burrows, and the birds will alight quite fearlessly within a few feet of him.

The food of the Puffin is chiefly composed of small fish, principally the fry of herrings and young cod-fish, but they also take large quantities of small sea insects, and occasionally molluscs. Like its relations, the Puffin often flies immense distances to feed, returning in the evening to its colony. Just before sunset bunches of them may be seen winging their way swiftly homewards just above the surface of the water, with whirring wings. It is a strangely silent bird before its eggs are hatched, and even in enormous colonies not a sound is to be heard except the rush of thousands of wings. If seized in its hole and dragged out, it utters a hoarse grating noise, which may be represented on paper by the syllable '*aaam*' or '*oom*.' But when the young are being fed the note is much softer, and may be heard proceeding from the burrows all round, like the purring of hundreds of cats.

The Puffin commences breeding operations in May, eggs being generally laid about the end of the first week of that month. They arrive at their breeding-stations about the beginning of April—rather later in more northerly localities; about the end of the month they are busy at work overhauling their burrows, or excavating new ones, and by the middle of May the nesting season is in full swing. The Puffins always breed in colonies, sometimes only composed of twelve or fourteen, often of as many thousands. Both birds help in making the burrow and building the nest. In some localities the Puffins make their own burrows, undermining the soft, loose soil; in others the deserted burrows of rabbits are used, while in still other places the nests are made among the masses of broken rocks and débris at the foot of some cliff. When the colony is on a cliff the burrows are usually along the top or on the grassy ledges and slopes among the rock faces. The Puffin's burrow is usually some three or four feet long, sometimes longer and sometimes shorter, and often branching out into three or four passages, all the inhabitants using the same entrance-hole. At the end of the burrow a slight hollow is formed, which is lined with a little dry grass, roots, large feathers, or pieces of sea-pink, and on this the single egg is laid.

When first laid the egg is pale bluish white in ground-colour, faintly spotted or streaked with underlying markings of purple grey and pale brown, but it very soon becomes discoloured by contact with the bird's wet feet and the soil of the burrow in which it is laid, often becoming thickly caked with mud or peat by the time it is ready to hatch. On some specimens the spots

are much more distinct than on others, sometimes forming a zone round the larger end of the egg, and sometimes scattered promiscuously over the entire surface. These marks are sometimes in the form of blotches, at other times they are fine scratchy streaks. When they are freshly laid, very fine specimens are rather like poorly marked Kittiwake's eggs, but the locality of the nest is sufficient identification. They vary in length from 2.58 to 2.0 inches, and in breadth from 1.75 to 1.62 inch. Incubation lasts from twenty-six to twenty-nine days, and both birds take their share in the duties of hatching the egg.

Young in down are uniform blackish brown, the bill, legs, and feet being the same colour.





## PLATE I

### PUFFIN. *Fratercula arctica*

*June 4th, 1895.*—The nest from which this Plate is taken was photographed from a burrow which I dug open to show the nest and the egg. Nearly all the nests I examined on this island of the Farnes had several large gull's feathers in the nest among the grass and roots which lined the hollow to receive the egg. On the Puffin island at the Farnes, the surface of the rocks is covered with a couple of feet of soft loose peat, in which the Puffins have excavated myriads of burrows; it is absolutely impossible to walk about in the thick of the colony, as the soil gives way at every step, taking the ornithologist up to his knees, and filling his boots with peat, besides being rather dangerous to the safety of the unfortunate Puffins below.

On a previous visit to the Farnes I found most of the young birds hatched, and it was most amusing to watch the old Puffins arriving at the burrows, each with a sand-eel or small herring in his bill. Most of the young birds sat up at the mouths of the burrows waiting to be fed, but hastily scuttled away into the nest on my approach, appearing cautiously again after a few minutes. The old birds were quite tame, and frequently alighted within a few yards of me and disappeared down their burrows. I watched one burrow, containing a single large young bird, for half an hour, and during that time the old bird brought in no less than four fairly large young herrings.





Univ.  
Calif.

PUFFIN. *Fratercula arctica*.

Plate I.

$\frac{2}{5}$  NATURAL SIZE.



## PLATE II

### PUFFIN. *Fratercula arctica*

*June 11th, 1896.*—This Plate is taken from a photograph of a huge stack on the north-east side of Lunga, Treshnish Islands. This stack is quite inaccessible, as it is absolutely perpendicular for sixty or seventy feet above the sea, and is separated from the main island by a chasm of that depth and some twenty or thirty yards across. Just above this chasm is a slope of peaty soil, which is absolutely riddled with Puffin burrows, while the cliffs below are tenanted by many Kittiwakes, Guillemots, Razorbills, and Shags. The main island also is thickly populated with Puffins at this point, and most of the rocks, especially those on the stack, are crowded with little bunches of these birds.

As I came up they flew off in hundreds, many of the birds appearing from their burrows to see what the disturbance was. They flew round and round in clouds, careering round and round the stack, and did not settle down again for more than a quarter of an hour. None of the eggs on the main island were hatched, though most of them were very highly incubated. Of course I could not get at those on the stack, but I did not see the old birds going backwards and forwards to the burrows with food, as they would have been doing had there been young. As a rule, when the young are first hatched, they are fed by their parents on half-digested food, which is disgorged in the nest and administered to the nestling by the old birds. After they get more advanced in age they are provided with the fry of herrings, which are sometimes eaten at once and sometimes allowed to lie in the nest for future use.





UNIV.  
CALIFOR.

PUFFIN. *Fratercula arctica.*



## PLATE III

### PUFFIN. *Fratercula arctica*

*June 25th, 1897.*—On the north-west side of the island of Unst, one of the Shetland group, there is one of the most picturesque colonies of Puffins to be found in our islands. The island itself is fringed with huge cliffs covered with innumerable grassy ledges, especially adapted for Puffins, and there are great piles of débris at the base of these cliffs which shelter hundreds of these quaint-looking little birds. This Plate represents some of the curious stacks, detached from the main island, which are thronged with sea-birds, of which, perhaps, the Puffin is the most numerous, though the Kittiwakes are very nearly as plentiful.

In the foreground are some Puffins sunning themselves on a rock, while the far cliff is white with Kittiwakes, and many Guillemots and Razorbills among them. The little white patch at the summit of the cliff—which is 280 feet high—is a colony of thirteen pairs of Fulmar Petrels under a huge mass of overhanging rock. I succeeded in getting right down among them, but had great difficulty in setting up my camera, as it was impossible to use a rope at all.

Here, for the first time, I found several nests of the Puffin on ledges under overhanging rocks, where not only the egg but the whole nest was quite visible many yards off.





PUFFIN. *Fratercula arctica.*

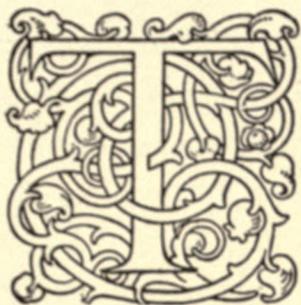
Plate III.

UNIV.  
CALIF.



# CRESTED TIT

## *Parus cristatus*



THE Crested Tit is one of our rarer native birds, and although it is a resident in the British Islands it is very local, and seldom strays beyond the area to which its haunts are confined. Its only known breeding-grounds in our Islands are in Scotland, in Strathspey and the surrounding counties of Inverness and Aberdeen. In winter it is a little more widely distributed, but authenticated instances of its occurrence beyond the above-mentioned area are few and far between.

The Crested Tit is not a migrating bird, though in the autumn and winter it wanders from its native pine woods where it has reared its young, and is often met with in the woods and plantations, or even in the gardens and along the hedgerows, in the districts in which it breeds.

In winter Crested Tits are gregarious, and are generally met with in flocks, associating with small parties of Coal Tits; sometimes with a few Blue Tits also, but as a rule with the former species. They are most energetic little birds, hopping from twig to twig, or hanging on to the pine-cones in search of insects, often running up the rough bark of the pines like the Creeper, and hunting for grubs and beetles in the crevices. They usually keep pretty much together, and when one bird leaves a tree the rest of the party soon follow. They are easily distinguished from their congeners, the Coal Tits, by their curious note, '*tur-ur-re-re-ree*,' which is repeated so rapidly that it forms a sort of trill. They have also the usual call-note, '*zee-zee-zee*,' which is common to most of the Tit family. Although the Coal Tits in these flocks may frequently be seen hopping about among the heather and blackberry bushes which form a carpet to the pine woods, the Crested Tit is rarely if ever seen on the ground. It prefers the tops of the pines, and it may often be recognised by the silhouette of its crest against the sky as it hangs under some fir-cone in search of food.

On the approach of spring the flocks of Crested Tits break up and become scattered throughout the pine forests; they are then very rarely seen, and as a rule their presence is only betrayed by their curious note. The breeding season commences about the end of April, and eggs are laid about the beginning of May. The Crested Tit usually builds its nest in a hole in a dead pine-tree or old fence post, but it is often met with in the cavity formed by some decayed branch of an alder or birch tree. I came across a nest in Strathspey which was built in the foundation of an old Hooded Crow's nest, and contained five fully-fledged young ones. This was on the 30th May; but such situations are uncommon, as a hole in a tree is almost invariably chosen.

The nest is very carelessly made of moss, dry grass, wool, feathers, or deer's hair, sometimes hare fur. In Strathspey deer's hair is the general rule, and nearly all the nests I have examined were lined with it. The hole is rarely very deep, about twelve inches being the usual thing. It is generally found in the trunk of some dead tree, of which there are many all through the forest. These dead trees vary from six to eleven inches in diameter, and are usually broken off some five or six feet from the ground. The outside skin of the tree and the core are usually fairly hard, but the intermediate part is generally rotten, and easily bored out by the birds.

From four to eight eggs are laid by the Crested Tit; they vary a good deal in the distribution of the surface spots. The ground-colour is pure white. On some specimens the surface spots are small and pretty evenly distributed over the entire surface of the egg, other specimens have the spots collected in an irregular mass at the large end of the egg, or in a zone round it, while some specimens have only a few rich bold spots. The colour of the surface spots is brownish red, the colour being darkest, as a rule, in those specimens which have small markings, and much paler on those with large spots. Some clutches are absolutely without markings of any sort, but as a rule the eggs of the Crested Tit are more boldly marked than is usual with the eggs of the Tit. They vary in length from  $\cdot 69$  to  $\cdot 58$  inch, and in breadth from  $\cdot 54$  to  $\cdot 47$  inch.

## PLATE I

### CRESTED TIT. *Parus cristatus*

*May 26th, 1896.*—This Plate was chosen from four photographs which I took of Crested Tits' nests in Rothiemurchus Forest, as it was the most typical site selected. Every here and there in these great pine woods there are tracts where the trees have died down to a great extent, and there are innumerable dead trunks, from four to five feet high, standing among the living trees. In these dead stumps the Crested Tits love to make their nests, and wherever there is a hole started, either naturally or otherwise, they soon work a deep enough hollow to hold the nest. I went about tapping these stumps with my stick, and soon located five nests; all of them contained nearly fully-fledged young ones. The one I found first is the one illustrated in the Plate. The nest was about seven or eight inches from the mouth of the hole, and was made entirely of deer's hair and a little moss. It contained seven fully-fledged young ones carefully packed into the nest-chamber, with all their heads sticking up clamouring for food. The old birds were in a fearful state of anxiety when I approached the nest, and fluttered about within three or four feet of me, with erected crests, scolding vigorously, and continually uttering their spluttering cry, '*tur-ur-re-re-ree.*' I photographed the nest-hole before I approached the tree, as I did not want to disturb the heather and grass in the foreground or to touch the orifice; but after I had secured the picture I tried to see into the nest, and some of the rotten wood broke away at the mouth of the hole. Instantly the whole seven young birds poured out and fluttered away over the heather in all directions, followed by their anxious parents, who raised a most dreadful hubbub.





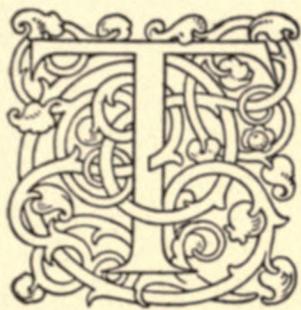
CRESTED TIT. *Parus cristatus*.

UNIV.  
CALIF.



# RED-BREASTED MERGANSER

*Mergus serrator*



THE Red-breasted Merganser is a resident in Scotland north of the Firths of Forth and Clyde, and breeds on the lochs in most of the northern counties, as well as on the adjoining islands, including the Orkneys, Shetlands, Hebrides, and St. Kilda. In England, however, it is only a winter visitor, though at that season it is widely distributed, and may be met with both inland and on the coast. In Ireland the Merganser is commonest during the winter, when it is distributed along the coast and on the inland lakes; but many remain to breed, especially on the west coast.

The favourite haunts of the Red-breasted Merganser are the rocky coasts broken up by innumerable little creeks and bays into which the burns run. The west coast of Scotland, with its endless creeks and sea-lochs, is the home of these birds, and their habits may be studied there with great facility. During winter the Merganser is gregarious, frequenting the bays in flocks of varying size; it procures most of its food in the water, and is very fond of frequenting the shallow pools left by the tide, where it feeds with its head under water, poking its bill about among the seaweed growing on the stones. It is an expert diver, and obtains much of its food below the surface. Under water it progresses like the Razorbill, using both its wings and feet, and can pursue its finny prey with great speed. The Merganser always brings the fish to the surface of the water to be swallowed, and raises itself in the water during the process, flapping its wings and stretching up its neck, and generally drinks immediately afterwards. After a spate the Merganser may often be seen at the mouth of some burn preying on the

small trout which have been carried down by the rush of water. The bird also destroys immense quantities of salmon fry. I once took eleven good-sized parr from the stomach of a drake which I shot on the Findhorn early in July.

By the end of March most of the Mergansers have paired and taken up their quarters on some loch or stream. The drake is very attentive to his mate, and both birds keep close company, feeding side by side in the water, sometimes sharing the fish captured, sometimes chasing each other for amusement and diving about in the still water.

On some of the lochs in the Island of Mull I have spent hours at a time watching these beautiful birds as they paddled daintily along the edge of the shore, searching among the half-covered stones for the tiny fish on which they feed, sometimes coming quite close inshore, sometimes diving and appearing again far out in the open. They swim very gracefully and sit low in the water, the bright plumage of the drake forming a charming contrast to the deep green of the clear water. When suddenly alarmed the Merganser usually dives at once and swims quickly out from the shore under water, reappearing at a considerable distance; it rises from the water with a considerable splash as a rule, but is a bird of quick and powerful flight, and the loud whistling strokes of its wings are distinctly audible when the bird is some distance off.

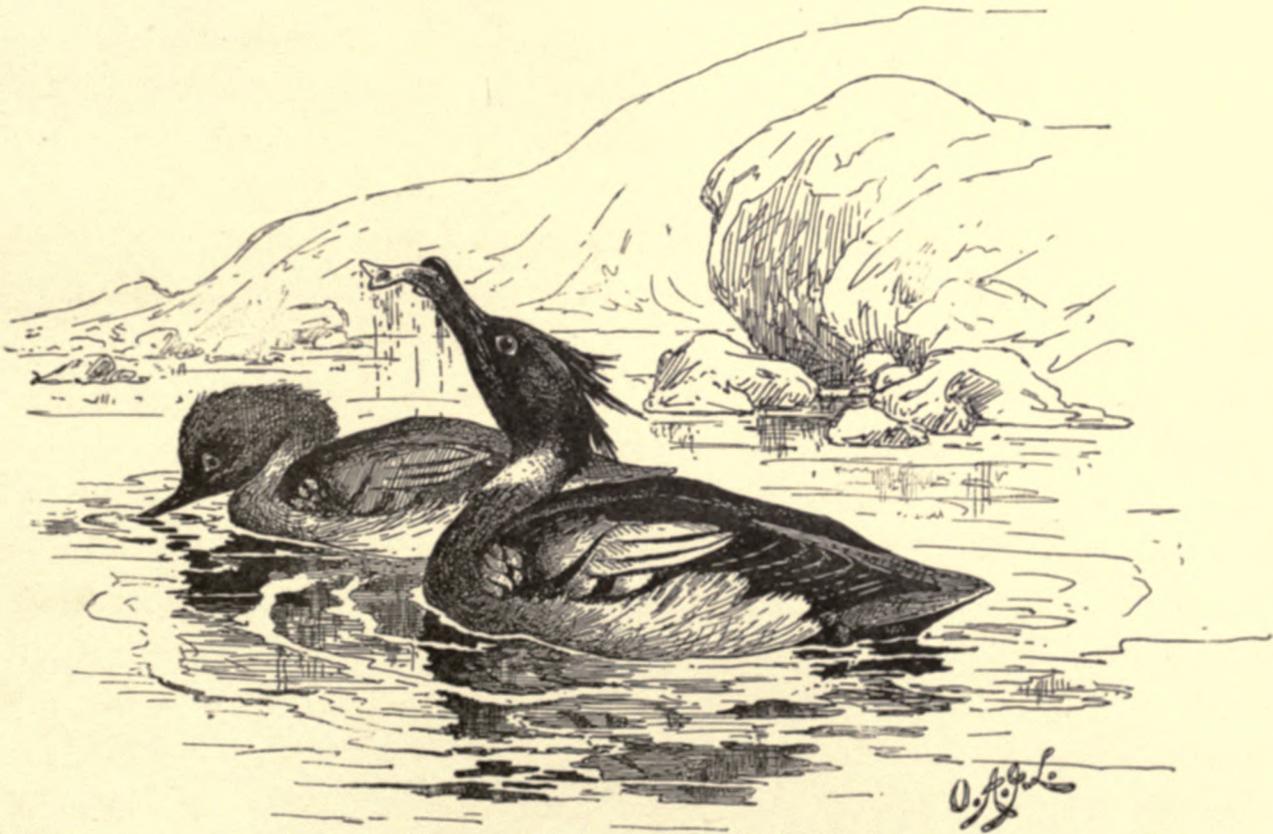
The food of the Merganser is chiefly composed of small fish, occasionally varied with crustaceans, molluscs, and small shell-fish, but, unlike most of its congeners, it does not appear to eat any vegetable matter. Its note is harsh, like that of most of the Diving Ducks, and may be represented by the syllables '*kārrrr-kārrrr*.'

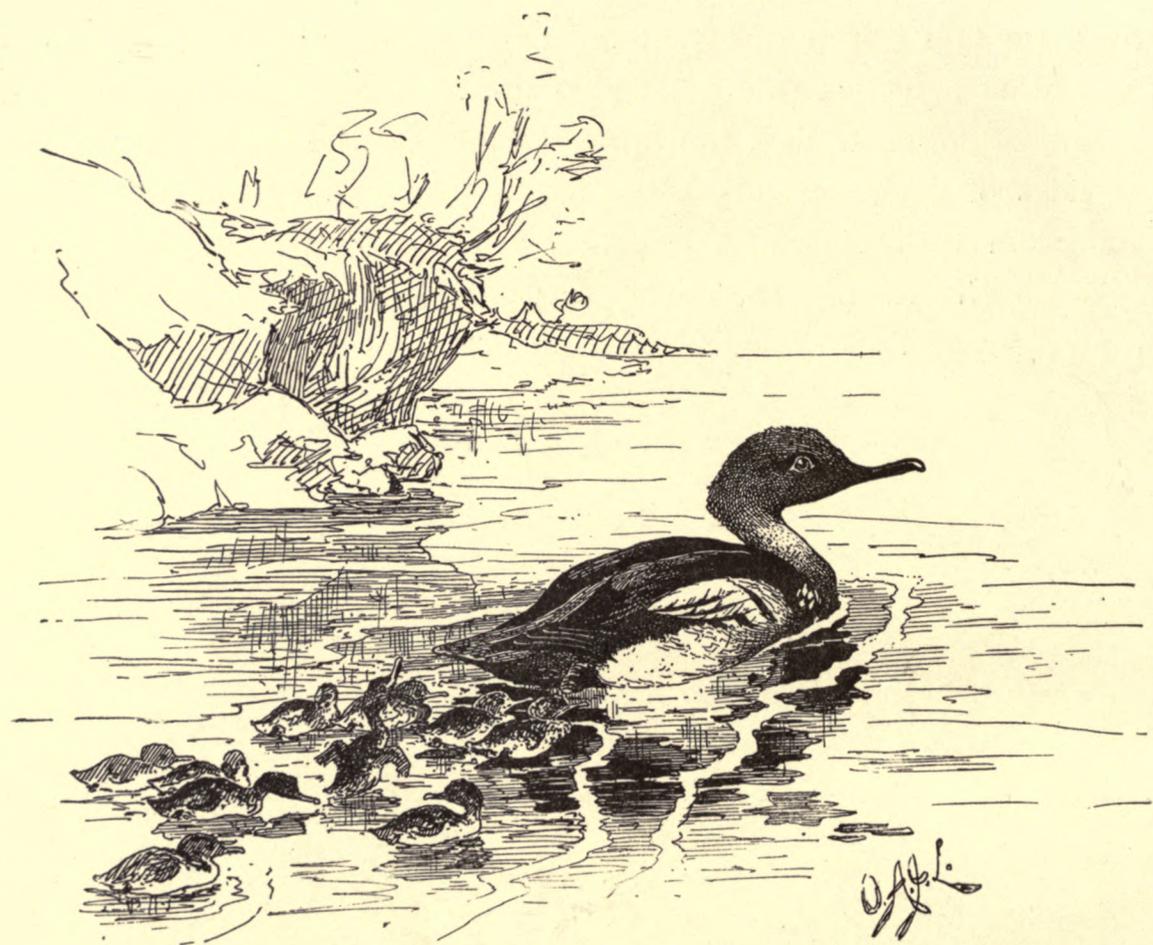
About the beginning of May nest-building commences, and eggs are laid from the end of that month till well on in June, even later in more northern localities. The nest is most often placed on some island, and only in very secluded places is it found on the mainland. It is usually under shelter of some kind, either a tuft of grass, broom bush, or overhanging piece of rock. I have even seen it in the mouth of an old rabbit-hole, but in this case the hole was entirely filled up with grass and turf behind the nest. Often it is made among the long heather growing on the shore of some loch, and is generally a mere hollow in the ground lined with a little grass and a few bits of heather and dead leaves. As the full complement of eggs is reached, the duck lines the nest with down plucked from her breast and sides. She sits very closely, and will often allow herself to be touched before she leaves

her eggs. Only one brood is reared in the year; but if the first nest be destroyed, a second is usually made, though the number of eggs laid in it is fewer. Two or three nests are often found on the same island in fairly close proximity, but this is owing to the scarcity of suitable sites rather than to any sociable instinct.

The eggs laid by the Red-breasted Merganser vary in number from seven to twelve, though nine is perhaps the usual clutch. They are greyish olive-green in colour, rather lighter than those of the Pheasant, and are rather glossy and smooth in the grain. They vary from 2·7 to 2·3 inches in length, and from 1·9 to 1·5 inch in breadth. The down is very pale brownish grey, with somewhat indistinct pale tips and centres.

Young in down are dark brown on the upper parts, shading into chestnut on the sides of the neck and on the head. There is a white patch on each wing, one on each side of the back between the shoulders, and one on each side of the rump. The under parts are white, as also are the lores, which are margined above and below with dark brown.





## PLATE I

### RED-BREASTED MERGANSER. *Mergus serrator*

May 29th, 1896.—The nest from which this Plate was taken was on a small island in the Spey below Aviemore Station. I had information of a nest on this island in 1895, and the situation was described to me very minutely. Accordingly, on my next visit to Rothiemurchus I went down to the island, and after a systematic search came upon the last year's nest, and not thirty yards from it I saw the Merganser sitting on her eggs. She was ridiculously tame, and I walked right up to her and actually put my hand below her wings into the nest before she got up and ran from the nest, taking wing a few yards off and alighting with a splash in a pool about fifty yards away. All the time I was at the nest she swam restlessly backwards and forwards uttering a harsh 'käär-käär,' and sometimes flapping across the still surface of the pool.

I went back next morning and took a photograph of her on the nest; but alas! when I came to develop it on my return home the light had got at it in some way, and it was quite useless.

Although the drake Merganser is very attentive to his mate in the early part of the breeding season, he does not evince any anxiety for her after she has begun to sit, and is seldom seen near the nest.



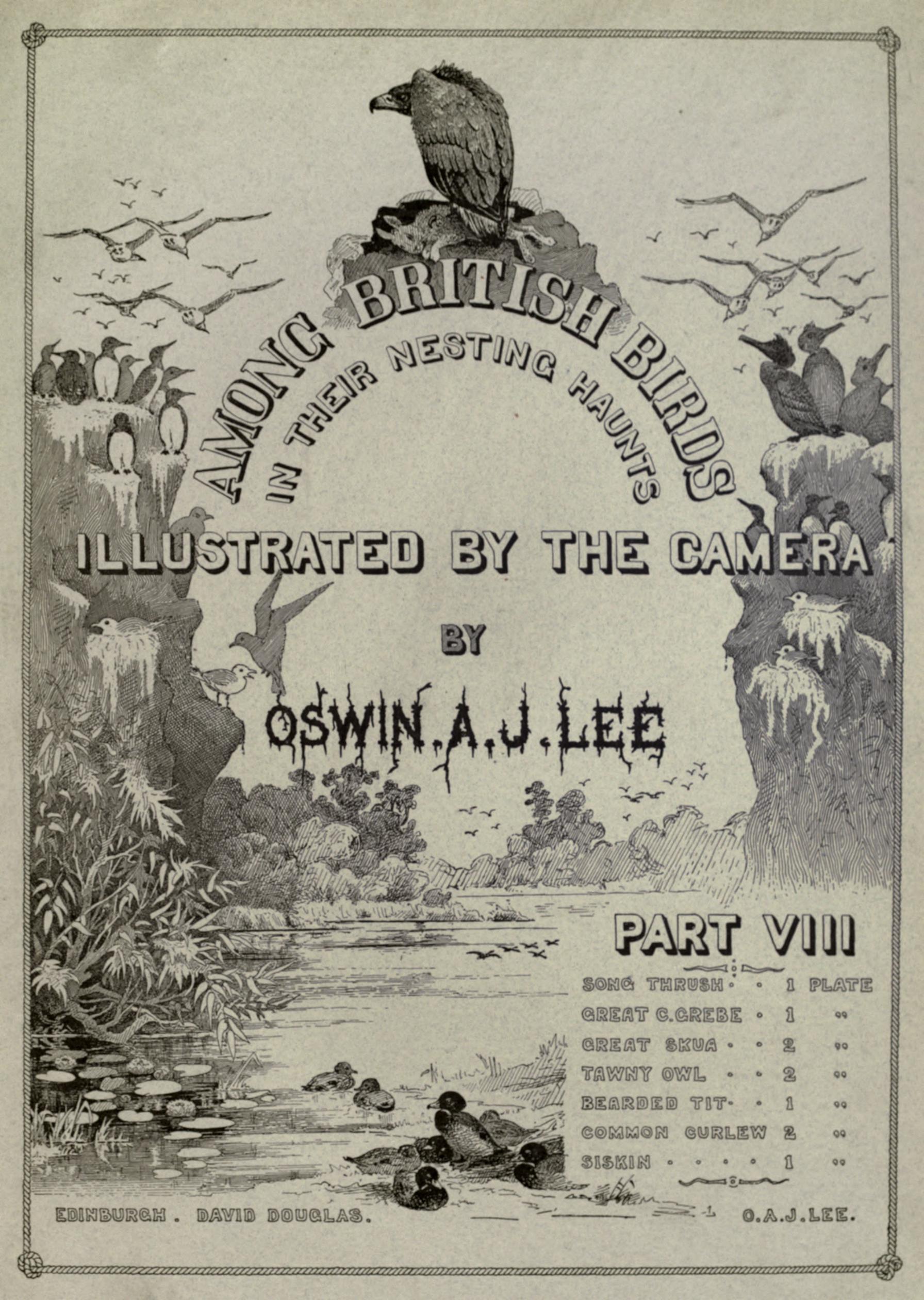


UNIV. OF  
CALIFORNIA

RED-BREASTED MERGANSER. *Mergus serrator*.

$\frac{1}{2}$  NATURAL SIZE.





AMONG BRITISH BIRDS  
IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

PART VIII

SONG THRUSH . . .	1	PLATE
GREAT C. GREBE . . .	1	“
GREAT SKUA . . .	2	“
TAWNY OWL . . .	2	“
BEARDED TIT . . .	1	“
COMMON CURLEW . . .	2	“
SISKIN . . . . .	1	“

EDINBURGH . DAVID DOUGLAS.

O.A.J. LEE.







# SONG THRUSH

## *Turdus musicus*



WHEREVER there are woods and thickets throughout our Islands, the Song Thrush abounds. In the far north of Scotland, where the birch-trees clothe the heathery steeps of the glens, the bird is not so common, but a few pairs are sure to be met with. It breeds in the Hebrides, the Orkneys, in Skye, and even on some of the smaller rocky islands, such as the Bass Rock, on which, in 1895, I found two nests in bunches of sea-campion on the grassy ledges near the old buildings. In England the Song Thrush is only a partial migrant, most of the birds remaining all winter in sheltered places; those which migrate usually pass the winter in southern Europe or the north of Africa.

The favourite haunts of the Song Thrush are the woods, plantations, and copses—in fact, anywhere that brushwood abounds, whether on the hillsides, on the banks of streams, or along the hedgerows. In gardens and orchards, and among the evergreens in shrubberies, the Song Thrush is one of the commonest of birds, and seems to prefer the shiny foliage of the laurels and hollies to that of any other shrub. In the wild glens of the north the varied notes of this little songster add a charm to the grandeur of the scenery.

In its habits the Song Thrush is rather a retiring bird, and likes to skulk among the thick evergreens where the branches hang down to the ground; in such places its presence is only betrayed by the rustling of the dead leaves, as the bird turns them over in search of its food. When on the wing, the Song Thrush takes much longer flights than its relative the Blackbird, and may often be seen flying over the tops of the tall trees, on its way to its feeding-grounds. In the autumn the Song Thrush may be flushed in hundreds from the fields of turnips, where it repairs to feed on

the snails and caterpillars which abound among the leaves. On the ground the bird progresses in a series of hops, and seldom walks or runs. Its method of catching worms is too well known to need description, as every one has seen the thrush hopping on the lawn in the early morning, stopping now and then to listen intently with drooping wings and head slightly on one side: a sudden pounce, and the worm is swallowed before the observer has seen the capture.

The Song Thrush is not so partial to berries as the Blackbird and the Thrushes, but in autumn it feeds largely on those of the mountain ash and hawthorn, especially when the ground is frozen and its favourite grubs and worms are not to be obtained; I have also observed, that of the many birds caught in the strawberry and raspberry nets in our gardens in the fruit season, the Blackbird is far the most numerous, and the Song Thrush but seldom found. The bird is very fond of the snails which abound along most of our hedges, and little heaps of their broken shells may be found near some large stone where the bird has dashed them to pieces in order to get at the juicy morsel within. Though it may be seen in small parties feeding in the newly mown hay-fields or on the lawn, it is not a gregarious bird, and when night begins to fall each one flies off to his own solitary roosting-place.

Of all our birds the Song Thrush is the finest singer, his notes are so rich and varied, and at dawn and sunset the birds vie with each other in making the sweetest music; each phrase of song is repeated two or three times, as if he was pleased with the combination of notes. The bird generally chooses the topmost branch of some tall tree or shrub, from which he pours forth such a rich and beautiful song that few can pass by without stopping to listen with delight.

The Song Thrush is a very early breeder, and eggs may be found as early as the beginning of April. The nest is usually found in some evergreen,—sometimes, but more rarely, in a deciduous tree; it is generally placed in some fork, or against the trunk of the tree, concealed by some tuft of twigs or leaves, occasionally on a bank under some clump of ferns, but the favourite situations are in laurels, rhododendrons, or in trees overgrown with ivy.

The nest is a large structure, the outside being built of dead grass, moss, and a few twigs. This foundation is then lined with mud or clay, and finally coated with a lining of decayed wood, which the bird obtains from the rotten logs or fence-posts in the neighbourhood; the lining is put on wet, and a day or two is allowed to elapse ere the first egg is laid, in order that the nest may be quite dry.

The eggs laid vary in number from four to five. I have twice found six; they are of a beautiful pale greenish blue, marked with small specks of very dark brown; some specimens have much larger markings than others, but the colour of the spots is usually much paler. Spotless specimens are occasionally met with, though rarely. They vary in length from 1·18 to ·95 inch, and in breadth from ·95 to ·75 inch.





## PLATE I

### SONG THRUSH. *Turdus musicus*

*May 5th*, 1896.—The nest from which this Plate was taken was in a large rhododendron bush in a garden in Perthshire. I noticed a little piece of moss and some dry grass woven into a fork of a small branch, and returned two days after to see what kind of nest it was. To my surprise I found a Thrush's nest just completed, the inside lining of rotten wood being still quite wet. The old birds soon arrived on the scene, and raised such a commotion that all the birds in the garden came round to see what was the matter. Four days afterwards there were three eggs in the nest, and I took a photograph of it. As before, the old birds kept near me all the time, scolding vigorously, and were aided by most of the cock Chaffinches in the neighbourhood.

I noticed on my last visit that there were several small pieces of white birch bark in the lining of the nest, which had appeared since the eggs were laid, so I presume that the lining had been added to.





SONG THRUSH. *Turdus musicus*.

$\frac{1}{2}$  NATURAL SIZE.

UNIV.  
CALIF.



# GREAT CRESTED GREBE

## *Podiceps cristatus*



THE Great Crested Grebe is a somewhat local resident in the British Islands. In Scotland there are only three or four known breeding-places, but in England and Wales it is much more common. In Ireland it breeds on several of the larger loughs.

The Great Crested Grebe is a gregarious bird; and although it is not found in our Islands in sufficient numbers to nest in colonies, it does so in many places on the Continent. The favourite haunts of this species are among the dense reed-beds, which fringe the shore of many of our lakes. In the fen districts of Norfolk among the Broads there are hundreds of acres of reeds; unfortunately the poor birds have been greatly molested in many parts, and there are but few pairs now breeding where formerly they abounded.

The diving powers of this bird are marvellous, and its food is entirely procured in the water. On land the bird is excessively awkward, and can only progress with difficulty in a strange shuffling manner. Its flight resembles that of a Duck, and it can progress with great speed, its long neck stretched out and its short wings beating with great rapidity and a curious whistling noise. Its food consists of small fish, young frogs, water-beetles, and little shell-fish, quantities of the bird's own feathers being generally found mixed with the food in its stomach, a habit which is common to all the Grebes.

The alarm-note of this species is a loud '*kek-kek-kek*,' but in spring the birds have a loud grating note resembling the syllable '*kwaw*.' The Great Crested Grebe commences nesting operations in the latter half of April, though eggs are rarely laid before the last few days of the month. In Scotland, as the reeds are somewhat later in attaining their full height, the

nest is usually placed among the dead reeds of last year's growth, and consists of a large floating mass of decaying reeds and water-plants anchored to the growing reeds. In the Broads all the nests I have visited have been among the clumps of fresh bulrushes well inside the edge of the reed-bed, and quite invisible from outside. As regards the covering of the eggs, I have noticed that eggs which are at all incubated are invariably covered up; fresh ones are as often uncovered as covered; and there is no doubt that the fermentation of the decaying vegetable matter materially assists incubation by keeping up the temperature.

The eggs laid vary in number from two to four, five being occasionally found, though three is a common clutch. When viewed against the light the inside of the egg is quite green, but the surface of the shell is covered by an irregular coating of a white, chalky nature; when first laid they are very nearly white, but soon acquire a rufous tint from the birds' feet and the continual contact with the decaying weeds. They vary in length from 2.4 to 2.0 inches, and in breadth from 1.55 to 1.35 inches, and there is usually very little difference in the shape of the two ends.

Young in down are very curiously marked: the upper parts are brown, while the head, neck, and under parts are dull white; the breast and back are striped longitudinally with black, and there is a greyish patch on each side of the head. The bill has two black stripes across it.

Young in down can swim and dive with ease within an hour of being hatched. The parents evince great anxiety if an intruder approaches too near, and will take the young birds under their wings and dive with them to a place of safety. On Hickling Broad in Norfolk I saw two broods of young Great Crested Grebes, and spent some interesting half-hours watching them as I lay in my boat; they fed outside the fringe of reeds, and on the slightest suspicion of danger both old and young birds would dive at once and come up inside the reed-bed quite out of sight.

## PLATE I

### GREAT CRESTED GREBE. *Podiceps cristatus*

*May 16th, 1897.*—This nest was photographed on Hickling Broad among tall bulrushes; the three eggs were quite fresh, and were not covered when we found the nest. I had no opportunity of watching the birds at the nest at that time, but quote the following from my journal regarding a nest in the valley of the Forth:—

On the 25th April 1896, I was rewarded by seeing a fine male Great Crested Grebe in full breeding plumage diving about near a large reed-bed in the north-east end of the lake. He was very tame, and allowed me to row within thirty yards of him without paying the slightest attention to me, so that I had ample leisure to admire him through my glasses. I failed, however, to find the nest that day.

On the morning of the 29th I started early to find the nest, as I was quite sure that the female was sitting on eggs not far off. I commenced operations by beating up the reed-bed. As I came close to a swan's nest among the reeds I saw a tell-tale ripple and line of bubbles running out from a point of reeds, just like some large pike making off to the deep water, and to my delight the female Grebe appeared about seventy yards off. In less than three minutes I found the nest. It was rather an insignificant-looking pile of dead reed stems, half-decayed weeds, and pieces of young water-lily leaves—the latter evidently freshly plucked,—floating in about two feet of water among the tall reeds, and anchored to them. It contained two perfectly fresh eggs, which were carefully covered up, and felt quite warm. The day was bright, but rather windy, so I did not try to photograph the nest, but devoted my attention to watching the birds.

After disposing of my boat at a little distance, I waded in among the reeds and secreted myself behind a thick clump about fifteen yards from the nest. I could see the two Grebes out in the open about eighty yards off; they sat low in the water, and swam about at a great pace. The male would occasionally swim round and round his mate, ducking his head and bobbing it up and down, every now and then striking the water with a single stroke

of his wings; the female, however, paid but little attention to his blandishments, as her eye never wandered from the vicinity of the nest. They swam about in the same spot for nearly half an hour, sometimes diving for pieces of green weed, which they tore to pieces on the surface, and sometimes toying with each other.

Just as my patience was becoming exhausted, the female swam closer inshore, and, after looking cautiously about, she dived. I kept my eyes glued on the nest. Suddenly she appeared about three feet from the nest, but must have caught sight of me, as she dived almost immediately and re-appeared about forty yards out. I noiselessly changed my position, getting further behind the clump of reeds. In about fifteen minutes she suddenly appeared again beside the nest, and, after a hurried look round, got on to it and carefully uncovered the eggs, arranging all the weeds on the nest before she finally turned the eggs with her bill and settled herself on them. The male appeared almost immediately about six feet from the nest, on the side nearest me, with a young water-lily leaf which had not yet unrolled itself; this he deposited on the side of the nest, the female giving it two or three playful dabs with her bill. During the short time that the male was at the nest, he kept up a sort of crooning noise, difficult to describe on paper, but resembling somewhat the syllable '*krrrāw-quaw-quaw, krrraw-quaw-quaw,*' repeated very slowly over and over again, and continually bobbed his head up and down. After he dived away the female composed herself to rest, and buried her head among her feathers.

By this time I was getting very cold and stiff, as I had been standing there about two hours, over my knees in water, without waders. Keeping my eye on the sitting bird, I made a slight movement. She jumped up and hurriedly covered up the eggs with some of the weeds on the nest, remaining bolt upright with her head erect, and listening intently as if she had not seen me. On my next movement she dived noiselessly into the water and appeared some sixty yards off right out in the open.

On the morning of the 30th there were three eggs in the nest, and on the 1st of May another egg was laid. On each occasion I found freshly plucked water-lily leaves on the side of the nest, but no trace of any withered ones! Can they have been used as food?



GREAT CRESTED GREBE. *Podiceps cristatus.*

$\frac{1}{8}$  NATURAL SIZE.

UNIV.  
CALIF.



# GREAT SKUA

## *Stercorarius catarrhactes*



NLY one locality, the Shetland Islands, is known as a breeding-place of the Great Skua in Great Britain; in Ireland there is no authentic record of it having nested. For a long time incessant persecution drove it from many of its stations in the Shetlands, but during the last few years, owing to careful watching, it has gradually begun to increase in numbers again.

The Great Skua lives almost entirely on the sea and the rocky shores of the sea-girt islands. It leads a solitary life, shunned by all the smaller gulls on whom it preys, chasing them until they disgorge their hard-earned food, and attacking the weakly or wounded ones. Its food consists of fish chiefly, but nothing comes amiss to it. It will devour half-rotten fish which has been thrown up by the sea, and pounce down on the herrings thrown overboard by the fishermen. It robs the nests of its smaller relatives, and devours both eggs and young. In Shetland I saw a Great Skua—or Bonxie, as it is called there—tearing a young Herring Gull to pieces while the frantic parents screamed above but did not dare to come too close to the robber.

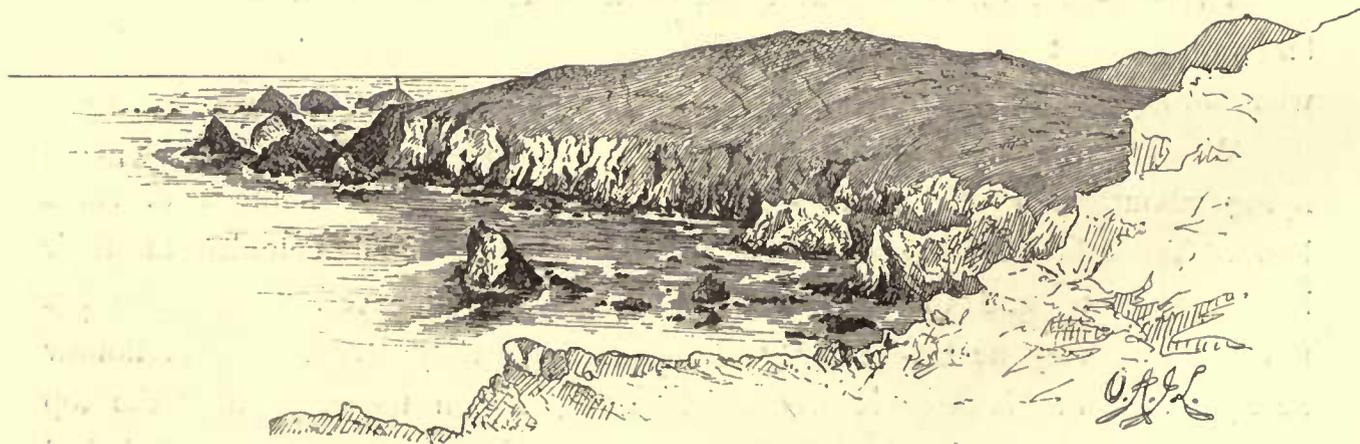
The call-note of the Great Skua is a short 'ag-ag-ag' like that of the larger gulls. At the nest the note is shortened into a deep 'gück-gück,' and when swooping down at an intruder it has a loud screaming cry, 'scoo-aaah.'

When the breeding season is approaching the Great Skua is seen in pairs, flying about their old nesting-haunts, or sitting on the summit of some knoll. Towards the end of April they collect in small colonies at their breeding-haunts, and the work of nest-building commences. The nests are never placed very near together, and are rather untidy structures. A hollow nearly a foot in diameter is trodden in the moss on the slope near the top of some hill; this is lined with bits of moss, a few feathers, and a good deal

of dead grass. It is a very bold bird at its breeding-place, and if the intruder approaches too near the nest it swoops down with tremendous force at his head, with outstretched legs and loud rushing of wings; time after time it will swoop, often striking the unwary naturalist with great force. On my visit to a colony in Unst I was struck so often and so severely that I afterwards always held a stick above my head, and found it most efficacious in warding off such attacks. It is no light thing a buffet by a Great Skua, especially as he usually takes one unawares from behind, knocking the hat over one's eyes, and startling one rather rudely.

About the middle of May, earlier or later according to the season, the Great Skua begins to lay. Two eggs only are laid; sometimes only one. They vary in ground-colour from dark buffish brown to very pale buffish brown, and are spotted and blotched with dark brown overlying markings and greyish brown underlying spots. I have seen two or three specimens in which the ground-colour was a very faint yellowish green, almost white, with some eight or ten underlying marks of purplish grey and one or two brown surface-spots. The markings are seldom very numerous or very conspicuous, as they are so nearly the colour of the shell; as a rule they are not much larger than a fair-sized pea, and are usually most thickly distributed round the large end of the egg. The eggs vary in length from 3.0 to 2.75 inches, and in breadth from 2.1 to 1.9 inches. They somewhat resemble the brown varieties of the Lesser Black-backed and Herring Gulls' eggs, but are always much rougher in the texture of the shell.

Young in down are pale chocolate-brown, slightly darker on the upper parts. They leave the nest soon after being hatched, and are usually found sitting surrounded by herrings of different sizes partially eaten. Round one pair of young birds I saw in Unst I counted no less than eleven herrings, many of them untouched.



## PLATE I

### GREAT SKUA. *Stercorarius catarrhactes*

*June 19th, 1897.*—This Plate was taken at a large colony of Skuas in the north of Unst. The colony is carefully protected. Having obtained permission to visit the site, I went to the ground and met the watcher, who read my letter of permission and proceeded to lead me to the colony. The nests were placed on the west face of a high hill overlooking the sea. On our way we had passed numbers of Richardson's Skuas fluttering on the ground and trying to attract our attention from their nests, but when we reached the Great Skua ground these birds disappeared, and their larger relatives had the place to themselves.

Nearly all the nests contained a young bird just hatched, except those which had already been hatched out some time. The birds dashed down upon us frequently, and I soon learned from the watcher that the most comfortable plan was to carry a stick above one's head, as I was struck severely by the birds three or four times.

I took several photos of the nests, round many of which innumerable herrings were lying, so that the young birds had no excuse for feeling hungry.





UNIV.  
CALIFOR.

GREAT SKUA. *Stercorarius catarrhactes*.

Plate I.

$\frac{1}{4}$  NATURAL SIZE.



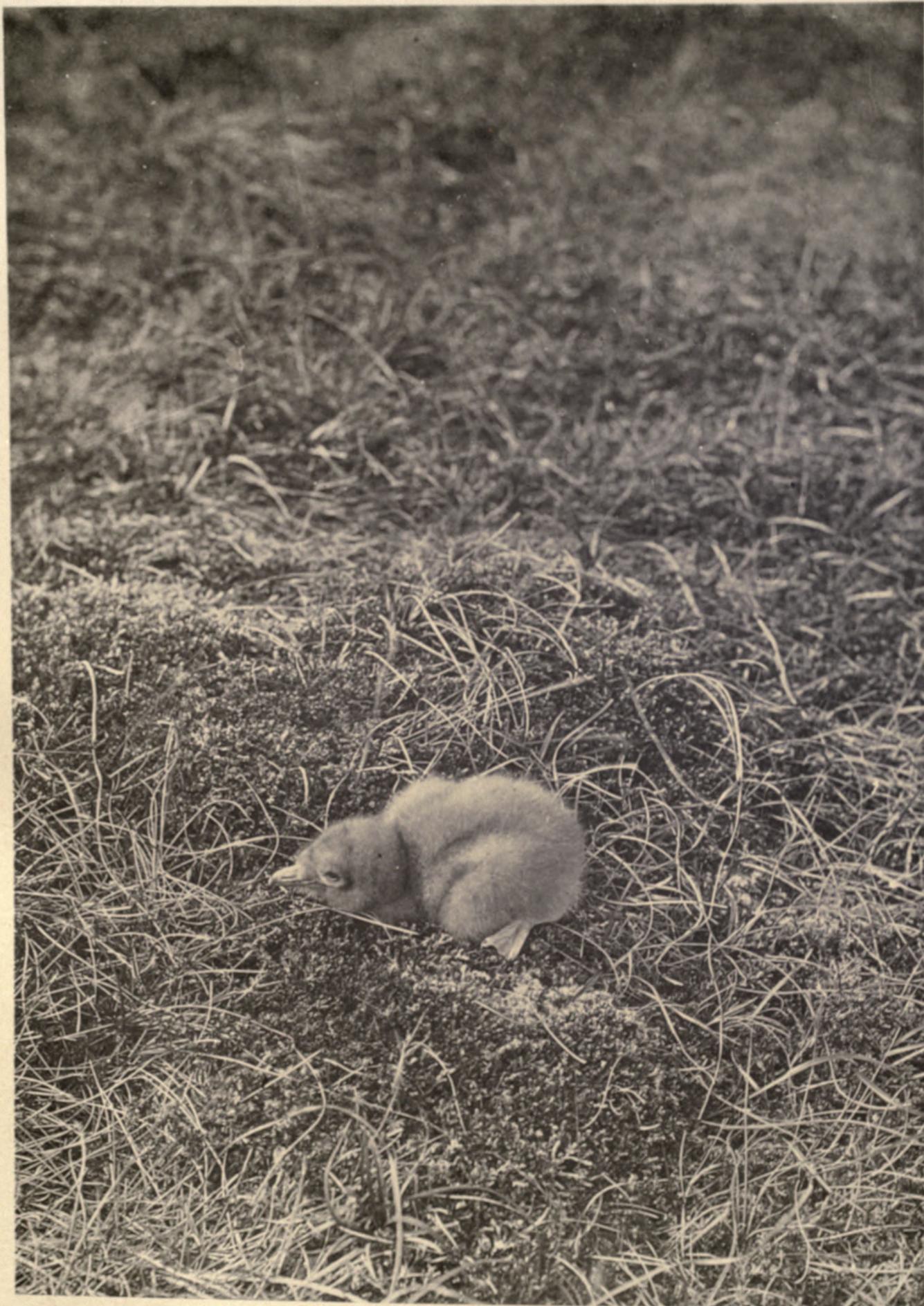
## PLATE II

### GREAT SKUA. *Stercorarius catarrhactes*

*June 19th, 1897.*—I took this photograph of a young Great Skua as he was making his way to a hiding-place. We had great difficulty in finding the two young birds belonging to this nest, as they had left it the day before. However, we soon found the tell-tale herrings lying about, and eventually found one of the young birds hiding under a tuft of grass. I got my camera set up and took his portrait as he started off to find a more secure retreat. The second young bird appeared from a small ditch while I was photographing his brother, but immediately hid himself again.

While photographing another nest on an adjoining hill, I left my camera standing in a somewhat unsteady situation while I retired some distance off to charge my plates; I was suddenly startled by a crash, and on looking round I saw my camera lying on the ground and the Great Skua making off. I never supposed that the bird would attack an inanimate object.





UNIV.  
CALIF.

GREAT SKUA. *Stercorarius catarrhactes*.

Plate II.

$\frac{1}{5}$  NATURAL SIZE.



# TAWNY OWL

## *Syrnium aluco*



THE Tawny Owl is resident in the British Islands. It is very fond of gloomy, secluded spots, hence its distribution is limited to wooded localities; and, as plantations of fir and other trees are becoming more extensive year by year, the bird is extending its range, though incessant persecution is telling on its numbers.

The Tawny Owl has an extraordinary liking for gloom and retirement; its favourite haunts, therefore, are in the depth of the forest. Some hollow oak in the middle of the wood is its home, where year after year it rears its young; or it may take up its abode in some giant ash or elm thickly overgrown with ivy, or in some crevice or cave in the rocks among the gnarled old pines. Its plumage is well adapted to conceal it from its prey, as it sits huddled against the trunk of some tree.

The evening is the hunting-hour of the Owl; at that time mice, rats, rabbits, and many other little creatures, come out of their retreats and scuttle about among the grass and in the open. Then the ghostly silent one flits about pouncing down on its prey. Perched on a dead branch in the top of some huge oak, his sharp eye detects the little woodmouse moving about in the dead leaves; down he darts noiselessly, to rise again with his prey, which he devours at his leisure. Its food consists of mice, moles, frogs, large insects, and an occasional small bird who has not gone to roost in time; on some occasions they have been known to stoop and carry off fish which have been feeding too near the surface of the water.

The Tawny Owl is easily distinguished from the Barn Owl by its note; the latter screeches, while the former has a low, clear 'hoo-hoo-hoo,' which sounds most weird and startling when heard quite close at nightfall in the silence of the dark woods. In summer the young Owls have a peculiar cry

which resembles the syllables '*chiz-wick, chiz-wick*'; this may be heard well on into August. Autumn and winter are the best seasons to hear the hoot of the Tawny Owl; and when there are two or three pairs of these birds in some large wood, they may be heard answering each other. It is no rare thing to see a Tawny Owl abroad long before sunset in some of the dark foggy days of winter, though the bird seems utterly bewildered if driven by accident into the sunshine, and is mobbed by all the small birds in the neighbourhood.

The Tawny Owl is said to pair for life, and it seems to confine itself to one locality, unless it is disturbed. I knew two nesting-sites in South Perthshire which were tenanted year after year by the same pair of birds. But frequently they have two or three favourite nesting-spots, which they use in turn, like many other raptorial birds.

It is an early breeder, and eggs are often laid in the beginning of March. Second nests are to be met with all through summer, my latest date being the 23rd of July. The usual site for the nest is some hollow tree; sometimes they will choose an old Squirrel's nest among ivy, an old Hooded Crow's nest in the top of a tree, a cleft in some cliff, or inside some old cart-shed. I have taken the eggs from the mouth of a rabbit-hole in Perthshire, and on another occasion have seen eggs in a similar situation. The bird makes no nest, merely laying its eggs on the bottom of the hollow chosen, the pellets, forming the refuse of its food, being the only lining.

The eggs laid vary in number from three to four; they are pure glossy white, very round in shape, and vary in length from 1.9 to 1.65 inch, and in breadth from 1.6 to 1.45 inch. Incubation is usually commenced as soon as the first egg is laid; hence eggs and large young birds are often found in the same nest.

Young birds are covered with a dirty white down; they remain in the nest for some time, and then sit on the neighbouring branches uttering their peculiar clicking note when they are hungry. They are fed by their parents long after they are able to fly.

## PLATE I

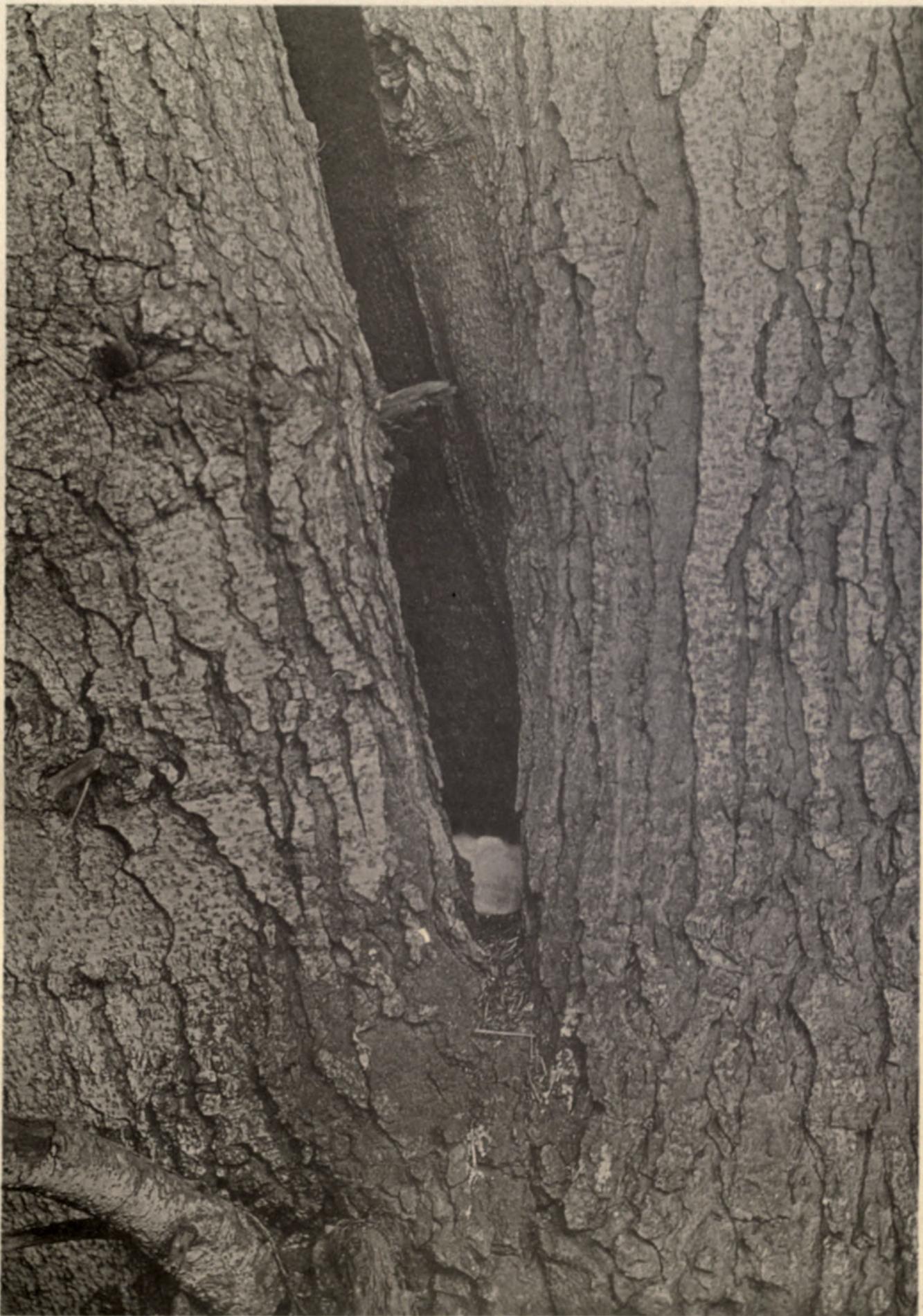
### TAWNY OWL. *Syrnium aluco*

*May 2nd, 1896.*—This Plate is from a nest in the cleft of a large silver fir near Doune, Perthshire.

I had seen a Tawny Owl fly from the tree before, and on climbing up I found two large downy young birds, who snapped their bills at me with great energy. There was absolutely nothing in the way of lining in the cavity except three or four refuse pellets and some Wagtail's feathers, and the only signs of food were two pieces of a mouse which had been torn up, no doubt by the old bird. I had some difficulty in getting my camera fastened up, so as to see into the cavity, as it was about twelve feet from the ground, but I managed by standing on a ladder and securing my camera to an overhanging branch.

In the same wood in 1897 I came across a nest of this species in the mouth of a rabbit-hole; there was no actual nest, but a slight hollow had been scraped to prevent the eggs from rolling down into the hole. It contained two fresh eggs.





TAWNY OWL. *Syrnium aluco*.  
3/4 NATURAL SIZE.

Plate I.

UNIV.  
CALIFOR

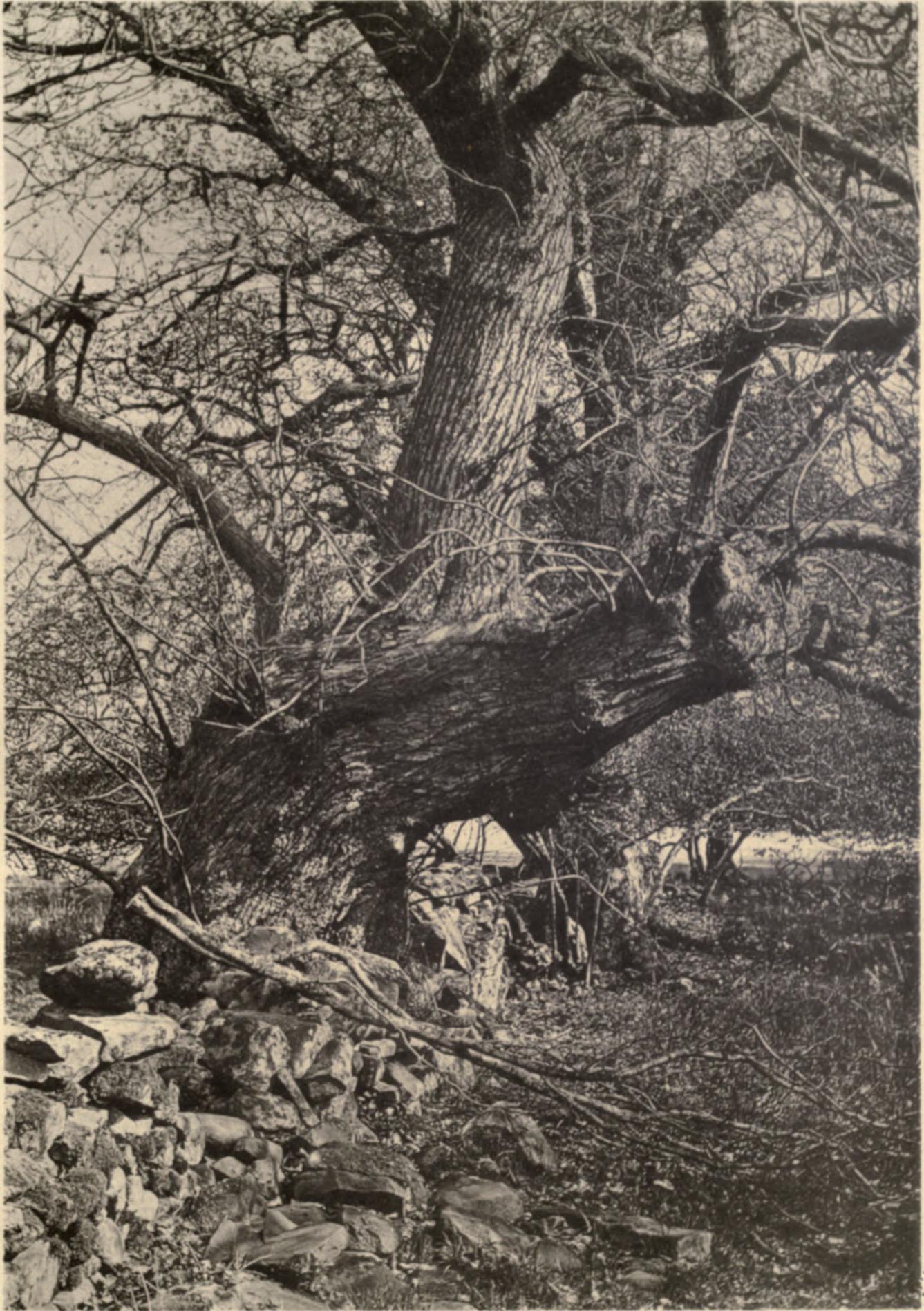


## PLATE II

### TAWNY OWL. *Syrnium aluco*

*April 29th, 1896.*—The old tree depicted in this Plate has been the nesting-place of a Tawny Owl for many years. I found young birds in the hole in 1884, and it has been tenanted every year since then. The nest is half-way along the horizontal limb to the right of the main trunk, and has two entrances, one from the main trunk and the other near the end of the limb itself. In 1895 a Jackdaw built its nest in the end next the trunk, and stopped up that end of the branch with sticks, so that there was no communication between its nest and that of the Owl. Both nests were occupied in 1896 and 1897, and the inmates appear quite friendly. The eggs are laid in a slight hollow on the rotten wood, about four feet from either entrance, so that they cannot be reached by the hand, a fact which has perhaps saved them from many a youthful collector.





TAWNY OWL *Syrnium aluco*.

UNIV.  
CALIFOR.



# BEARDED TITMOUSE

## *Panurus biarmicus*



ALTHOUGH the Bearded Tit has been subjected to incessant persecution by bird-fanciers and egg-collectors, it still breeds in the fen districts of Norfolk, and strays, during autumn and winter, to many of the surrounding counties.

The huge tracts of reeds found in the Broads are particularly adapted to the requirements of this beautiful bird, as it is entirely a bird of the reeds. Its food consists chiefly of the seed of the reed, but small flies and insects of all kinds are devoured greedily. In the autumn, when flocks of these birds wander from their haunts, they feed on grubs, insects, and the seed of various grasses.

On my visit to the Broads in the middle of May I had ample leisure to admire this beautiful bird as we punted our boat through the lanes of open water which wind about among the vast beds of reeds. Once or twice I caught sight of one of these birds clinging to an upright reed, and saw them flit across the channel with a curious undulating flight, but it was not until we landed and began to walk quietly about among the tall reeds and sedges growing beneath that I really had an opportunity of watching their habits. They were very tame, and I stood and watched a pair chasing the flies and hunting up the reed stems for small insects. Their mode of procedure reminded me of the Creeper: they would start at the foot of some tall reed stem and work their way right up to the flower, which they examined all over; then they would drop down to the bottom of the next, work up it, and so on. I saw one flying over the top of the reeds, dancing about like a huge dragon-fly. Their call-note is a clear, musical '*tang*' or '*ting*,' like striking a piece of metal with some hard substance, and I heard one of the males utter a short, monotonous song rather like that of the Coal Tit, '*zee-zee-chui-chui*,' or '*chee-chee-zu-zu-chui*.'

Unfortunately there was a light breeze blowing, and the rustling of the reeds prevented me from hearing their note as clearly as I should have liked.

Although the Bearded Tit usually begins nesting operations in the middle of April, I was fortunate enough to find a nest. The little bird rose from the undergrowth a few feet in front of me, as I was going through some tall reeds. I marked the place where she got up with my handkerchief, but we took nearly a quarter of an hour to find the nest. It was some eight feet from where she rose, under a plant of marsh-marigold, right on the ground. It was entirely built of pieces of dead reed, lined with the finest leaves, and finished off with an inside lining of reed flowers, and contained six perfectly fresh eggs, though the date was the 16th May. I took two photographs of the nest, and withdrew some distance. I could hear the little bird among the sedges, but did not see her till afterwards. She kept uttering a low, grating note, something like the 'chzzz' of the Whitethroat.

Two other nests which had been hatched out were placed on clumps of sedge, concealed by broken-down reeds lying over them, and were built of reed leaves and flat grasses, and lined with the flower of the reed. The cavity which contained the eggs was in all cases rather deep, and beautifully rounded, though the material used in the construction must have been most difficult to work with.

The eggs laid vary in number from four to seven. They can hardly be confused with the eggs of any other British bird. They are white, slightly suffused with a brownish tint, and fantastically spotted and streaked with curious dark-brown markings. When perfectly fresh the dark colour of the yolk shows through the transparent shell, imparting a delicate rosy tinge to the egg. They vary in length from .74 to .65 inch, and in breadth from .60 to .54 inch. Young birds are curiously and beautifully marked on the inside of the mouth.



## PLATE I

### BEARDED TITMOUSE. *Panurus biarmicus*

*May 19th, 1897.*—This nest I photographed in a large reed-bed in the Norfolk Broads. I put up the little bird, and found the nest after some difficulty. After taking a couple of photographs of the nest, I withdrew from the immediate neighbourhood for half an hour. At the end of that time I returned and cautiously approached the nest. I could just see the head of the little bird, and was surprised to note, by the slate-grey head, that it was the male who was sitting; the head of the female is brown. I got within three feet of him, and could see his bright yellow eye and yellow bill quite distinctly. On my attempting to stoop down, the little bird hurriedly left the nest and crept among the undergrowth like a mouse for some three yards from the nest, when he rose and disappeared among the tall reeds, uttering his alarm-note, a sort of 'chzzz.' I waited some time to see if he would return when I was there, but he moved about among the tall reed stems about fifteen yards off and would come no closer, so I left him and moved further on to examine an empty nest, which I had passed on my way there.





BEARDED TITMOUSE. *Panurus biarmicus*.

$\frac{1}{2}$  NATURAL SIZE.

UNIV. OF CALIFORNIA



# COMMON CURLEW

## *Numenius arquata*



THE breeding-grounds of the Curlew are confined principally to the moors and high-ground of Scotland, Ireland, and the north of England, although in autumn and winter it may be found on most of our coasts. It is a resident in this country, coming down to the coast when the breeding season is over.

The favourite summer haunts of the Curlew are the moors, heaths, and swamps throughout our islands. It is very partial to all ground which is overgrown with heather, but nests also in the grassy high-lying pastures. In winter it is very abundant on most low-lying coasts, and in muddy estuaries where there is good feeding huge flocks of these birds may often be seen. It is a very wary bird, and can rarely be approached within gunshot. It flies fairly high, as a rule, and with great rapidity, now beating its wings quickly, now gliding along with wings outstretched and uttering its curious cry, commencing slowly, and gradually quickening till it ends in a sort of trill.

During summer the food of the Curlew consists chiefly of insects, worms, and larvæ. Berries of various kinds are also eaten. In the winter, when on the coast, they feed on small crustaceans, sand-worms, tiny shells, and occasionally on the leaves and shoots of marine plants. The Curlew seems to post sentinels to give the alarm when feeding on the coast, much in the same way as the Wild Geese, and their warning cry alarms the whole flock on the approach of danger, causing them to rise far out of gunshot. On the moors, its feeding-grounds are the small marshy spots near some pool, or beside the little streams which drain the land.

About the end of March and the beginning of April the Curlews quit the coast, the flocks break up into pairs, and return to their breeding-places on

the hills and moors. Nest-building commences about the end of April, and eggs are laid during the first half of May; sometimes as early as the last week of April, but this is unusual. The nest is usually placed on a small patch of dryish ground, sometimes in the middle of a tuft of grass, sometimes in a hollow beside a bush of heather, or among the stems of the bog-myrtle. I have found it in a patch of small birch-trees against the trunk of a tree some four inches in diameter; but it is usually in the open, so that the bird has a wide outlook, and can leave the nest when an intruder is still far off. As a rule the Curlews will all rise as soon as an intruder sets foot upon the moor, and fly round and round in circles at some height, uttering their mournful cry, '*ker-wi, wiw-i, wiw-i, wiw.*' When the young are hatched their anxiety is most painful, and they will fly close over the ground round the intruder with outstretched wings, or run along the ground. At the nest the male usually rises first, while the female runs swiftly to some distance from her treasure, ere she takes wing.

The nest is rather slight and very shallow, being a mere depression in the ground lined with a little dead grass, a few sprays of heather, and a dead leaf or two. The eggs laid are four in number, enormously large in proportion to the size of the bird. The ground-colour varies from various shades of olive-green to brownish buff, blotched and spotted with olive-brown, and a very dark brown, and a few underlying markings of grey. I have twice seen eggs of a pale pea-green ground-colour, very faintly spotted with brown and large purple grey undermarkings. The markings are usually fairly equally distributed over the entire surface of the shell, but on some specimens they are chiefly confined to the large end of the egg, and are confluent, forming irregular blotches of colour. On some specimens the markings are large and few in number, and there are occasional markings of a yellowish brown. They vary considerably in shape, a much shorter and rounder egg being often found in a clutch. They are usually pyriform, and vary in length from 2.85 to 2.30 inches, and in breadth from 1.95 to 1.68 inch.

Both birds share in the duties of incubation, and only one brood is reared in the year, as far as is known. Young in down are pale yellowish grey, mottled and streaked with dark brown on the upper parts, the bill brown, shading to greyish brown at the base of the lower mandible, the legs and feet slate grey.

## PLATE I

### COMMON CURLEW. *Numenius arquata*

*May 16th, 1896.*—While walking along the side of Loch Scridain in Mull I saw the old Curlew rise from this nest, and as the eggs were singularly beautiful, I took a photograph of the nest.

On the island of Eorsa, on the west coast of Mull, the Curlew is very abundant. It is a small island rising from the sea-level at the west side, and getting gradually higher till it ends on the south-west side in precipitous rocks some ninety feet high; on the grassy top of the island we found no less than eight nests, and there must have been many more which we did not see. I counted twenty-three birds wheeling about in the air above us at one time. Many of the nests were placed in a hollow overgrown with little bushes of bog-myrtle, and the nests were usually among the stems of this plant.

Nearly all the eggs were very highly incubated, although it was only the middle of May, so it must have been an early season with the Curlews, though the Kittiwakes that year were surprisingly late, in spite of the mild early spring.





CURLEW. *Numenius arquata*.  
3/4 NATURAL SIZE.

Plate I.

UNIV.  
CALIF.



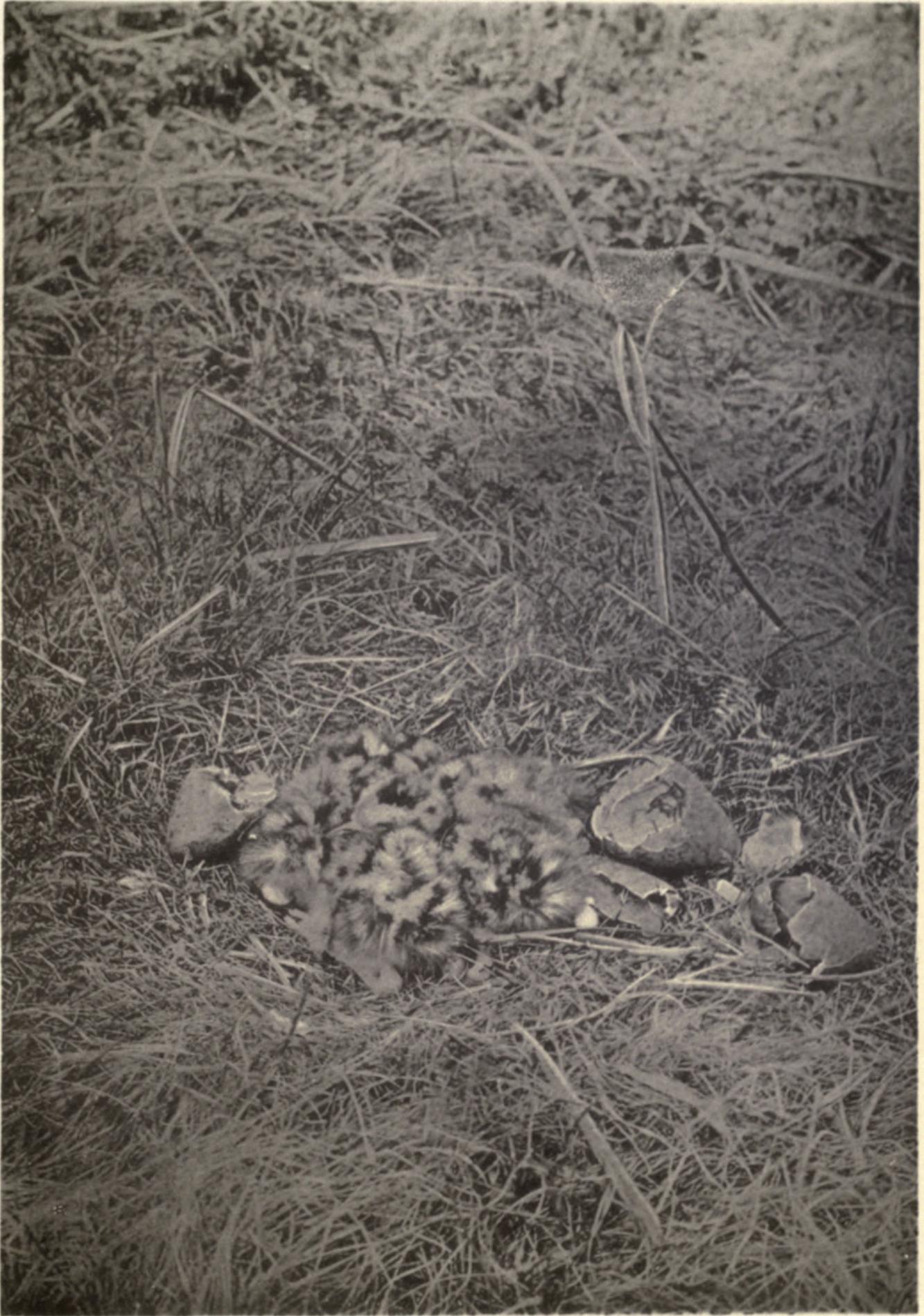
## PLATE II

### COMMON CURLEW. *Numenius arquata*

*May 26th, 1894.*—I came across this nest on the shoulder of a hill near Broughton, in Peeblesshire, just as the young birds were coming out of the shells, so I marked it, and hastened home for my camera. When I arrived at the nest, all the young birds were hatched and huddled in a bunch in the nest; the broken shells of the eggs lay all round the nest, and the old birds flew round, wild with anxiety for the fate of their young.

I secured two photos from different points, and having packed up my camera I crouched down some little way from the nest. In a few minutes I heard the little birds cheeping, and they finally left the nest one after another and hid themselves in the grass. I looked about for them for a few minutes, but only succeeded in finding one bird, crouched down beside a small stone.





CURLEW. *Numenius arquata*.

$\frac{1}{2}$  NATURAL SIZE.

Plate 11.

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# SISKIN

## *Chrysomitris spinus*



THE Siskin is a resident in many of our counties, especially in Scotland; in England it is best known as a winter visitor, but there are authentic records of its having bred in some fourteen different counties. In Ireland it has also been recorded as having nested, but is most frequently seen in winter.

The breeding-haunts of the Siskin are the pine woods of the north, much the same localities as those in which the Crossbill is found. In their actions on the trees they somewhat resemble the Tits, sometimes hanging upside down, or hovering under a branch like a Willow Wren; their antics are especially noticeable when they are exploring the cones on the ends of the drooping larch branches. When feeding on the catkins of the alder in the winter, I have noticed them holding the catkin in one claw while they deftly pulled it to pieces and extracted the seeds. They are especially fond of joining some flock of Lesser Redpolls, and lead a sort of gypsy life wandering from place to place in small flocks, here one day, gone the next, just as the fit takes them. They are very tame, and can be approached within quite a short distance.

The food of the Siskin is principally composed of seeds of various kinds, but it also eats shoots of trees and insects, on the larvæ of which its young are chiefly reared. In Rothiemurchus in Strathspey I noticed the Siskin feeding their young on a small green caterpillar, which lived on the birch and alder bushes. Their song is peculiar and very attractive, impossible to describe on paper; once heard it cannot be confused with that of any other bird. Their call-note is a loud '*tsu-sing*,' and when feeding in a flock a low '*kik-kik-kik*' is frequently uttered, chiefly by the males.

The Siskin is an early breeder, and generally rears two broods in the year;

the first eggs are laid early in April and the second in June. The nest is nearly always in some pine or fir, at a considerable height from the ground, and is placed in a fork near the end of a horizontal branch far from the trunk of the tree. I once flushed a Siskin from a blackthorn bush on the side of a bare hill near Callander, Perthshire, and found a newly-made nest; but though I returned on several occasions, and waited some time in the neighbourhood, I never saw the bird again save once, and no eggs were ever deposited in the nest. Near the Lake of Monteith I used to find a good many nests in a small clump of large silver firs; they were nearly always very near the tops of the trees, and out on the point of some branch which was overhung by the one above. The gale of 1894 laid low all the silver firs, and I have not since observed the same number of birds. In Rothiemurchus Forest the nests I have seen were usually in the top twigs of some Scotch fir, or on the tip of some spruce fir branch high up; as a rule, the nest is quite out of sight from the ground, and can only be located by watching the birds.

The nest somewhat resembles that of the Greenfinch, but is usually more carefully constructed. A foundation of dry grass and heather or fir sticks is first made; on this the nest proper is built of moss and grass-roots with a little lichen on the outside lined with fir-roots and thistledown; a second type of nest is very like that of the Chaffinch, but is not lined with horse-hair.

Five or six eggs are laid; the ground-colour is a pale bluish green with markings of a deep reddish brown, and underlying marks of pinkish grey. On some specimens the markings take the form of streaks and specks; on others they are mere round spots; they are generally most conspicuous on the larger end of the egg. They measure from  $\cdot 72$  to  $\cdot 64$  inch in length, and from  $\cdot 54$  to  $\cdot 50$  inch in breadth.

The female builds the nest herself, the male assisting in collecting the materials. During the period of incubation the female alone sits on the eggs, while the male brings food to her; both birds, however, supply the young with food.

## PLATE I

### SISKIN. *Chrysomitris spinus*

*May 17th, 1895.*—The nest depicted in this Plate was built in a tall Scotch fir-tree near Loch Vennachar, Perthshire. It was placed right out on the point of a big branch about thirty feet from the ground; I had to get up a small spruce alongside and look across at it. With some difficulty I managed to see into it, and discovered that it contained five newly hatched young birds. The nest rather resembled an untidy Chaffinch's nest; it was built chiefly of moss and lichens, and appeared to be lined entirely with fine dry grass.

All the time I was at the nest, the old birds flew close about me, and often perched within ten feet of me, one of them carrying a small brownish caterpillar in its bill.





SISKIN. *Chrysothrix spinus*.

$\frac{1}{2}$  NATURAL SIZE.

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