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BRITISH BIRDS

WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

AN ILLUSTRATED MAGAZINE DEVOTED
CHIEFLY TO THE BIRDS ON THE BRITISH LIST

EDITED BY

H. F. WITHERBY M.B.E. F.Z.S. M.B.O.U.

ASSISTED BY

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AND

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Bird Room.

BRITISH BIRDS

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JUNE 2.
1924.

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H. F. & G. WITHERBY.

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NOTE ON NOMENCLATURE.—In this volume of BRITISH BIRDS the systematic list printed at the end of *A Practical Handbook of British Birds* and republished in *A Check-List of British Birds* will be taken as the standard for nomenclature.—ED.

THE TURTLE-DOVE IN GLAMORGANSHIRE.

SOME BREEDING NOTES.

BY

GEOFFREY C. S. INGRAM, M.B.O.U., AND H. MORREY
SALMON, M.C.

FOR a number of years the Turtle-Dove (*Streptopelia turtur turtur*) has been steadily increasing in numbers in Glamorgan-shire. As far back as 1899 the species is referred to in *The Birds of Glamorgan* as "Not very common," but this statement is qualified by another which states that it "Is now more numerous than formerly."

Although this increase is apparent all over the county, our observations as set out here, are confined to one particular locality, a wood situated on the outskirts of the City of Cardiff, which has recently been included within the City boundaries.

This wood was given over to the axe in 1911 and felling was carried on until the middle of 1913, when it had been completely cleared with the exception of a few solitary oaks left standing here and there.

Formerly it was the stronghold of Sparrow-Hawks (*Accipiter n. nisus*) and Jays (*Garrulus g. rufitergum*), and immediately the first strip was cleared, Nightjars (*Caprimulgus e. europæus*) took possession, also Grasshopper-Warblers (*Locustella n. naevia*), Tree-Pipits (*Anthus trivialis*), White-throats (*Sylvia c. communis*), Garden-Warblers (*S. borin*), Willow-Warblers (*Phylloscopus t. trochilus*), and later a couple of pairs of Nightingales (*Luscinia m. megarhyncha*).

To-day the place is an almost impenetrable wilderness of small birches and oaks some 15 to 30 feet high, overgrown with brambles, and crossed by tracks that are rapidly becoming obliterated. It has now passed into the builders' hands, and already rows of houses are eating into its heart, but in spite of this, some twelve pairs of Turtle-Doves nested there last season (1923).

It was in 1914 that the first pair was seen in the wood and from that date on, their numbers have steadily increased.

The birds rarely arrive before the second week of May, and nesting begins shortly afterwards. Two broods appear to be reared by at least some of the pairs, as fresh eggs have been found both early in June, and in the middle of July, also young birds have been seen on the wing upon the same dates as nests have been discovered in the process of building.

The finding of nests has never been an easy task, especially during the last three years when the undergrowth had grown to such an extent that it was with the utmost difficulty that a path could be forced through it. It is a fairly simple matter to mark down a likely spot owing to the fondness of



TURTLE-DOVE: MALE BROODING YOUNG (6 DAYS OLD).

(*Photographed by H. Morrey Salmon.*)

the birds for sitting on some nearby prominent branch, or attention is drawn to unseen birds by the sound of their cooing. On several occasions, in the early mornings, creeping up quietly, we have found the female seated on a half completed nest cooing softly, while her mate answered from a branch a few yards away.

When incubating or brooding, Turtle-Doves sit closely, and a danger we learned to fear, was, that forcing our way right up to an unsuspected nest, the sitting bird was suddenly alarmed, and dashed off with a rush, kicking the eggs off their frail cradle, and so putting an end to all hopes of further observation.

On June 20th, 1923, we discovered a nest in course of construction upon a low bough of an oak tree that reached across a bramble bush at a height of some three to four feet from the ground. The site was close to one of the overgrown tracks, from which it was possible to get a glimpse of it, and offered splendid opportunities for observation. Fearing to disturb the birds unduly, nothing was done until June 30th, when taking advantage of their absence from the nest, which now contained two eggs, a light screen of birch branches was rapidly constructed some twelve feet away. Behind this screen it was possible to creep up and watch without alarming the sitting bird. The eggs hatched on July 9th, and on the 14th a hide was put up behind the screen, from which photography was attempted the next day. Unfortunately, owing to the darkness of the situation, exposures of less than half a second were impossible, and so many interesting events had to be left unrecorded except in our note-books.

The following observations were made from this hide:—

July 15th (young six days old). Entered the hide at 8.10 a.m. without disturbing the female Dove which was brooding the young. On hearing the slight noise made she crouched low, but soon recovered confidence and busied herself preening the young at short intervals. At 9.55 the male commenced cooing from a tree a dozen yards away, the female answering immediately, when he flew in to the branch on which the nest rested, about four feet from it.

The female immediately walked along the branch to him, touched his bill with hers and flew off, while he walked on to the nest. The young were very eager and reared themselves against his breast. He took their bills into his, one on each side, and then, crouching low, began to pump up food. Every few seconds he would pause and raise himself slightly, the young then hanging down from each side of his bill in a very odd looking manner. Once more lowering himself, pumping started afresh, and so it went on, pause and feed every few seconds for some ten minutes. After being fed the young quieted down and he brooded and preened them until 10.45, when they became insistent and he fed them



TURTLE-DOVE : FEMALE BROODING WITH HER FEATHERS PUFFED OUT.

(*Photographed by G. C. S. Ingram.*)

again for six minutes and then resumed brooding. At 11 o'clock he left and both adults were absent for three hours.

During this time the youngsters occupied themselves with preening and sleeping. They are covered with yellowish down through which the feather quills can be seen.

At 2.10 p.m. the female returned and the feeding performance was gone through for between five and six minutes, after which she brooded them with all her feathers puffed out.

July 18th (young nine days old). Entered the hide at 5.30 p.m. The adults were absent but the youngsters are quite safe. Their feathers are showing, and the red-brown colour of the wing is noticeable. They sleep a lot but are constantly changing their positions, and often preen and scratch their heads with their feet.

At 7 p.m. an exciting incident took place, when an adult Jay alighted on the branch about a foot from the nest, and eyed the youngsters (which were sitting with their backs to it) greedily.

Hopping cautiously nearer, it stepped upon the edge of the nest, and the watcher in the hide was just about to shout aloud to stop the murder of the innocents, when they, feeling the weight of the Jay upon the nest and evidently mistaking it for one of their parents, reared themselves up suddenly, and so scared it that it flew off. Later on young Jays were heard in the trees near at hand, and the adult must have remained somewhere close, for when the observer's companion turned up at 7.30 p.m. it flew away from behind the hide with a harsh scream.

At 8 p.m. the adult Doves were sitting on top of an old yew tree close to the nest. Feeding evidently only takes place at intervals of three to four hours.

July 21st (young twelve days old). Entered the hide at 2.50 p.m., both parents being absent. The young are greatly grown and well feathered. Filaments of pale yellow down are still present on their heads and breasts. The black and white of the tail and the white underparts are conspicuous. Their eyes are chocolate-brown with blue-grey pupils, and their beaks and legs light flesh-colour.

They lie still for intervals of about half an hour, and then break into a period of activity, when they wander around the nest, preen themselves (paying particular attention to the sprouting tail-feathers), stretch and flap their wings vigorously. They also indulge in a game of nibbling at each others' beaks, and then settle down side by side, both facing in the same direction. They are very active when they start



TURTLE-DOVE: MALE FEEDING YOUNG (6 DAYS OLD).

(Photographed by H. Morrey Salmon.)

moving about, and the nest, which is in a filthy condition, seems much too small for them and has a bad tilt.

Up to 5 p.m. there was no sound or sight of either of the parents, but at that hour one of them began cooing in the wood to the left, and then moved to the yew tree. At 5.30 it flew down to the nest and was greeted by the youngsters with flapping of wings and weak squeaks. The feeding process was a much more strenuous affair than last time it



TURTLE-DOVE: NESTLING (12 DAYS OLD).

(Photographed by G. C. S. Ingram.)

was witnessed. It lasted some four to five minutes and was accompanied by a hurricane of wildly flapping wings.

July 22nd (young thirteen days old). In hide from 8.30 a.m. to 12.45 p.m. The young spent most of their time sleeping, with intervals of preening and walking around the nest. Neither of the parents appeared although they were in the vicinity from about noon, sitting in the old yew tree, but as they made no attempt to approach the nest it is probable



TURTLE-DOVE: JUVENILE PLUMAGE GROWN WITH SOME DOWN
ADHERING (20 DAYS OLD).

(Photographed by H. Morrey Salmon.)

they were waiting for the food in their crops to become in a suitable condition to feed the young.

July 24th (young fifteen days old). Visited the nest at 7 a.m. and found the youngsters perched on the branch about a foot away from it.

July 25th (young sixteen days old). 6.30 p.m. The youngsters have moved into the small oak tree growing over the nest.

July 29th (young twenty days old). 9 a.m. The young Doves were still in the tree over the nest. By careful stalking we managed to get a photograph of one of them, and then hid up and watched the old yew tree in the hope of getting a picture of the adults on their favourite perch. The parents visited the young in the oak tree at 10.30 and again at 11.30 a.m. One of the youngsters broke cover soon after and flying strongly alighted among the lower branches of the yew tree. Almost directly afterwards a juvenile Sparrow-Hawk flew past and hovered over the yew tree mewing fretfully, as though it had caught sight of the young Dove and was meditating an attack, but it sheered off without making an attempt.

This was the last we saw of the young Doves. We visited the wood on August 5th but could find no trace of them, although they must have been close at hand as we heard the adults several times.

Flocking evidently takes place soon after this date, and on August 9th a small flock was seen on the stubble, and much larger companies on August 18th and 25th, and September 1st.

By the middle of September most of the birds have departed for their winter quarters, but stragglers have been seen up to the 22nd of the month.

MIGRANTS AT THE READING SEWAGE FARM.

BY

NORMAN H. JOY, M.R.C.S., M.B.O.U.

DURING 1923 I did my best to keep records of the migrants passing through the farm. I was away for several weeks, including from the middle of August to the middle of September, but I fortunately got some friends, who know the particular birds well, to do it for me. Messrs. H. P. O. Cleave and A. S. Corbet have on several occasions visited the farm, and Mr. J. L. Hawkins did so about every third day from the middle of August, so that the farm was visited thirty-two times from July 26th to October 15th.

The first day in the spring I visited the farm was on March 29th, when I saw two Green Sandpipers (*Tringa ochropus*) and one Wheatear (*Ænanthe ænanthe*). I was able to go about twice a week until the end of May, except between April 19th and May 4th. As might be expected there were not so many migrants passing through as in the autumn, but Dunlins (*Calidris alpina*) and Ringed Plovers (*Charadrius hiaticula*) were doing so until May 18th. There is little doubt that many migrating Passeres call in on their way north and south, but one seldom had time to look long for them, and it was always difficult to judge whether the Hirundinidæ seen on a certain day were local visitors or genuine migrants. There was also more of the farm to explore each day than last year, as there was much more water about.

I have thought it best to give some extracts from the diaries kept during the autumn in the form of a calendar, as it shows best how some of the birds were passing through. Of course we could not guarantee that we saw all the birds at the farm on a particular day, but I do not think many were missed.

	July 26	Aug. 1	Aug. 7	Aug. 11	Aug. 16	Aug. 21	Aug. 27	Aug. 30	Sept. 4	Sept. 11	Sept. 15	Sept. 18	Sept. 24	Sept. 27	Sept. 30	Oct. 4	Oct. 8	Oct. 11
Grey Wagtail	—	—	—	—	3	—	—	1	—	—	—	—	—	6	1	—	—	4
Ringed Plover	—	2	—	—	—	5	18	9	2	3	21	8	8	8	5	3	—	—
Ruff ...	—	—	—	—	—	—	—	—	—	—	3	4	5	6	—	—	—	—
Dunlin ...	—	10	1	1	7	1	9	5	32	3	6	6	6	9	—	—	30	5
Curlew-Sandpiper ...	—	—	—	—	—	—	—	—	—	—	2	9	7	—	7	—	5	—
Little Stint ...	—	2	—	—	3	2	—	—	—	—	—	2	—	—	1	—	—	1
Common Sandpiper ...	3	4	9	1	6	6	4	1	2	2	—	—	3	1	—	—	—	—
Green Sandpiper ...	7	5	15	8	7	10	3	3	10	8	6	8	3	1	1	1	4	2
Greenshank ...	—	—	2	2	—	—	2	—	—	—	—	2	4	—	—	—	—	—

No others of these birds were seen after October 11th, except Green Sandpipers.

The following are some notes on the birds seen:—

WHEATEAR (*Ænanthe æ. ænanthe*).—Besides the one on March 29th, one was seen on April 16th, one on October 4th, and two on October 10th.

GREY WAGTAIL (*Motacilla c. cinerea*).—Besides the ones noted above a pair were seen on April 4th.

SAND-MARTIN (*Riparia r. riparia*).—There were about 100 flying about the farm on April 10th, none anywhere else in the neighbourhood.

GARGANEY (*Anas querquedula*).—Two males on April 16th; a pair on April 19th.

SHOVELER (*Spatula clypeata*).—Three or four pairs nested.

COOT (*Fulica atra*).—Ten to fourteen were seen from April 19th to May 22nd, and a pair and two young on July 26th. A man, who has done work on the farm for years, told me that Coots turn up every spring, but do not nest.

RINGED PLOVER (*Charadrius hiaticula*).—One on May 5th; two on May 9th; none on May 13th or 14th; three on May 16th; one on May 18th.

RUFF (*Philomachus pugnax*).—The ones in September evidently did not come in all together, as there were only three on the 17th and five on the 26th.

DUNLIN (*Calidris alpina*).—One was seen on April 10th; five on May 9th; eight on May 14th; five on May 18th; one on May 31st.

CURLEW-SANDPIPER (*C. testacea*).—Dr. G. C. Low and I saw one, with seven Dunlins, on May 13th. There was a slight tinge of red all over the breast, the Dunlins all having their black breasts. Several in the autumn had quite red breasts.

LITTLE STINT (*C. minuta*).—The two seen on August 1st were in full summer plumage. None were seen between September 20th and October 2nd, nor between October 4th and 11th.

COMMON SANDPIPER (*Tringa hypoleucos*).—One to three were seen from May 13th to 26th.

GREEN SANDPIPER (*T. ochropus*).—Two on March 29th and three on May 15th were the only ones seen in the spring. Two were seen on July 11th. I had some hopes of persuading a pair to nest, by putting Blackbirds' and Thrushes' nests in branches of trees among the herbage. Three have been on the farm the whole winter.

REDSHANK (*T. totanus*).—Apparently only one pair nested on the farm, as only three were seen about all May, but about twenty were there on June 19th, evidently the young birds

getting together before going to the coast. A few remained about until September 11th, and an odd one occasionally appeared until December 4th.

GREENSHANK (*T. nebularia*).—None seen in the spring.

BLACK-TAILED GODWIT (*Limosa limosa*).—One remained from August 7th to September 14th. It was very tame.

BAR-TAILED GODWIT (*L. lapponica*).—On September 18th we saw two Godwits with the Ruffs, but they were too far off to see their tails. We determined to watch them when they flew, but when they did so we were watching a Hobby (*Falco subbuteo*) flying after Swallows. However, they flew by near enough for us to see, and Mr. Hawkins watched them for a long time at about forty yards on the 20th and 25th.

COMMON CURLEW (*Numenius arquata*).—One on May 13th; six on May 7th; one on August 21st. Ten were constantly about most of January, 1924.

LITTLE GULL (*Larus minutus*).—One was continually there from October 4th to 13th. It was an immature bird in its second year, as it had lost the black on its tail, and had not much brown on its back and shoulders. It was almost constantly on the wing, often flying with Black-headed Gulls, picking up its food from the surface of the water when flying. The only other record for Berks is at Sandford, October, 1890.

HERRING-GULL (*L. argentatus*).—An immature specimen on May 22nd.

The Black-tailed Godwit is a new record for Berks.

The Bar-tailed Godwit is only recorded "near Reading, 1802," so this is the first definite record, making eight definite new records for Berks at the sewage farm since May, 1922 (see Vol. XVI., pp. 53, 203).

A PRACTICAL METHOD OF RECORDING BIRD-CALLS.

BY

WM. ROWAN.

THE following notes are appearing in print for two reasons. In the first place, the many systems of recording the calls and songs of birds that have been published from time to time, have not proved of practical value. They have attempted too many things at once and as a result have become unpractical. It is my first object to demonstrate that there exists a method, sufficiently simple to be understood by all, and at the same time conveying far more information than the plain phonetic renderings now in common use. My second reason for publishing is to comply with the requests of various friends who have tried the method and adopted it permanently.

The system has the advantage of simplicity, plasticity and adaptability, and that it does not lay claim to scientific accuracy. The last may not sound like a recommendation, but as a matter of fact it is. Anything that could pretend to be really accurate would inevitably be too cumbersome to be practical.

The most nearly accurate method extant is that of musical notation, but this method has many flaws that are well known. It is moreover understood by such a small number of bird-students that it is unusable for general purposes. There are many good examples available, the twenty-seven versions of the songs of the Meadow-Lark by C. N. Allen in the *Nuttall Bulletin*, Vol. VI. (1886), pp. 145-150, being amongst the best that I have personally seen. It is true that anybody can sit down at the piano and play them but the writers of such records are few. Their use is therefore greatly restricted.

Modifications of the strict musical record are also plentiful. A good example is described under the title of "The study of bird notes" by Dr. Hans Stadler and Cornel Schmitt in *British Birds*, Vol. VIII. (1914-1915), pp. 2-8. The authors of this article claim for their system, as I do for mine, simplicity, but a glance at their examples and a perusal of their text, convinces one in very short time that the use of this too is confined entirely to musicians. It is therefore ruled out for the layman.

A more striking system which eliminates musical score altogether is that advocated in the *Condor*, Vol. XXV. (1923),

pp. 202-208, by Richard Hunt under the title "The Phonetics of Bird Sound." It is unfortunately impossible to summarize briefly this interesting article, but that the method described can never be of practical value is evidenced by the following statement: "A Dictionary of Bird Sounds can be built up by co-operative action and the words should eventually be classified not only in accordance with their references to the four classes of phonetic bird sound, but also with reference to the factors of pitch, intensity, speed, form, expression and timbre. For example, 'shrill' refers to *pitch*; 'loud' to *intensity*; 'rapid' to *speed*; 'staccato' to *form*; 'querulous' to *expression*; and 'rich' to *timbre*. As a working basis of possible value to others in their bird utterance work, I submit the following alphabetically arranged, *incomplete* (the italics are mine) list of BIRD SOUND DESIGNATIONS." Here follows a list, which presumably is only a beginning, of 500 "bird sound designations." When the average ornithologist is doing his best to master German, French and other languages in order to enlarge his field of literature, his life will surely prove too short to contemplate the use of this means of recording bird-calls.

But this author's system is based on an old and very sound principle. When the small boy comes home and says he has heard a bird singing "cuckoo" he is unconsciously doing the logical thing and applying phonetics to his description. The pros and cons of phonetic renderings have been discussed fully a great number of times and while there are objections, they are not as numerous or as weighty as those against musical and other notations. Any modern book that attempts to give bird-notes makes use of the principles of phonetics. But so far as I am aware no other author has gone so far in their application as Mr. Hunt, and he, so it seems to me, has gone beyond the limits of practicability.

It appears to me that an *accurate* rendering of bird-calls, with the means at present at our disposal, is entirely impossible. A bird's song cannot be stated in terms of the piano, or violin, or any other man-made instrument, even when one's knowledge of music is sufficient to think and write in those terms. The human singing voice is no better. The speaking voice in many respects is preferable to these. It has the added advantage that it can be written down in terms intelligible to everyone. If one compares descriptions in German, French and English books of some well-known and common bird-song, one realises more easily how near perfection a phonetic rendering really comes, for in the three

languages the descriptions are so alike as to be recognizable without difficulty. German, however, it must be conceded, has a useful accession in its modified and lengthened vowels.

The simplest way to discuss the advantages of the particular method I use is first of all to describe it. I employ four symbols to denote accentuation. They are these, (A) \cup for a very brief note; (B) \smile for a longer one, but both without particular accent; (C) $-$ for a short note well accented; (D) — for a longer one, also accented. If the notes are uttered in continuity, I indicate it by joining the accent symbols with a thin bowed line. Under the symbols is a phonetic rendering of the call. Thus the call of the Cuckoo becomes

— \cup — —
“cuck-oo,”

because both notes are accented, but the last slightly more than the first. But this does not terminate the description. As it stands it gives a more perfect idea of the call than the usual description, but not an adequate one. The phonetic rendering itself, since “oo” is lower on the scale of vowel sounds when arranged in descending order than the vowel sound of “cuck,” indicates a dropping in pitch between the two syllables, but no more. But it so happens that the interval between the syllables of the Cuckoo’s call may vary from a minor third to a fifth. No hint of that is conveyed in the ordinary description or in mine as given above. A musician would employ his knowledge of musical notation and put on to paper a fairly accurate representation of the various possibilities, but only fairly accurate, for birds do not recognize the intervals of human musical script. They may produce three notes in the space of our two, etc., so that even the trained musician may not be able to indicate the interval correctly. But as already pointed out, musician-ornithologists are comparatively so rare, that their methods are in any case not of general value.

The system I am here advocating, while less accurate than that of the musician, has at least the advantage that every one can not only read it but write it as well. I merely drop the accent symbol of the second syllable below the level of the first, varying the length of the drop to suit each case. The call of the Cuckoo would thus appear either as:—

— \cup — \cup — — — \cup — — — \cup — —
“cuck-oo, cuck-oo” or even “cuck-oo”

Anyone glancing at such a description would gather many more facts than could be conveyed by any other equally simple means. Accentation and relative pitch are suggested as well as the usual phonetic values. Actual pitch is appreciated by so few that to think out some way of showing it would merely add a useless encumbrance. The fact that the notes of a Warbler may be four or five octaves higher than those of an Owl, never enters the heads of most ornithologists. They know the kind of note an Owl produces, and when the phonetic rendering of an Owl's hoot is put before them, the idea of true pitch never bothers them. It can quite well be omitted. Timbre cannot be demonstrated by any means yet invented, and for much the same reasons it also can be ignored. The most essential facts for practical field use are thus included.

I use this method only for calls and short songs. It could conceivably be used for lengthy ones, but it would become unwieldy. In view of the fact that the majority of field-workers remember songs rather by general impression than by feat of memory, to use it for these would be superfluous.

The call of the Cuckoo late in the season is modified to "cuck-cuck-oo." As written here there is no suggestion that there are two common alternatives, but if they are described thus—





"cuck-cuck-oo" and "cuck-cuck-oo,"


this feature immediately becomes evident. The significance of the difference both here and in the case above may prove, upon investigation, to be of considerable importance, when such a graphic description as this would be of particular value. In the tremendous volume of Cuckoo literature that has accumulated in the last few years, cock birds have been but little considered, and it is well within the bounds of possibility that some development may direct attention to the habits of the males. Selected individuals might in that case figure prominently, just as certain females have loomed large in recent discussions. If the difference of interval in the common call proves, as I suspect is the case, to be individual, it would be a useful means of identifying particular birds. I have heard three different intervals in a single morning in circumstances that made it more than likely that they were produced by three separate individuals.

A graphic indication of the kind suggested here, expressing nothing more than relative values, would be far more useful

for field-work than a more accurate musical version that only a small percentage of observers could hope to employ. Its scientific value may be nil, but its practical value is very great. Some years ago, when new to Canadian birds, I was collecting for a few weeks in forest country so dense that many birds were heard but not seen. The majority were finally collected after much arduous effort, and over a hundred certainly identified species recorded. But there was one bird with a call entirely unknown to me and of such peculiar timbre that even its group could not be determined by its call. I sent a graphic description of the type above to a well-known Canadian ornithologist. I gave no hint of the actual pitch or timbre but merely accentuation and relative pitch for the various notes, accompanied by the usual phonetic description. I got my identification by return. Three years later, a thousand miles further west, I again heard the call. This time I managed to collect the singer. The identification was perfectly correct. I mention this incident, not only because it demonstrates that all the *essentials* for practical purposes are included, but also to illustrate the fact that it is intelligible to those who see it for the first time.

I know no one who has tried this system once who has not continued to use it. A knowledge of bird-calls is invaluable in the field, a fact so well known to all ornithologists that it does not require elucidation. But when one has heard an unknown call only once it is all too easily forgotten again shortly after. Reference to such a graphic description, however, recalls the notes so vividly, that a song once heard and put down can be recollected quite clearly years after.

In one's own jottings one can vary the accentuation symbols in length, weight, curvature, etc., to indicate all kinds of delicate shadings; one can make small additions in a second that can convey a great deal of information. Two particularly useful additions that appear frequently in my own notes are,  to indicate a swell, e.g., over the trill of the Wood-Warbler (*Phylloscopus sibilatrix*) and  to indicate that the note is slurred up, as in this call of the Curlew (*Numenius arquata*):


" cur-ee."

Moreover, if necessary, one's own notes, if based on the simple general principles here outlined, even if embellished with personal modifications, could be interpreted by others.

NOTES

NOTES FROM HOLY ISLAND, NORTHUMBERLAND,
1923.

MEALY REDPOLL (*Carduelis l. linaria*).—Several occurred from November 2nd onwards. A male shot on November 5th is referable to the form known as *Carduelis l. holboellii*.

GREY-HEADED WAGTAIL (*Motacilla flava thunbergi*).—An adult female on May 2nd.

YELLOW WAGTAIL (*M. f. rayi*).—Several between April 13th and May 9th.

WHITE WAGTAIL (*M. a. alba*).—One or two on April 23rd, a male on the 24th, a female on the 27th, a female on the 30th, a male on May 2nd, two on the 4th, three on the 8th and one on the 9th.

CONTINENTAL GOLDEN-CRESTED WREN (*Regulus r. regulus*).—A female on April 16th. As this bird occurred along with Continental Robins (*Erithacus r. rubecula*), I presume it to belong to the above race. It is the only occasion on which I have observed it during the spring migration.

FIRE-CRESTED WREN (*R. i. ignicapillus*).—A male was obtained on November 9th; a second example was secured and another seen the following day.

GREAT GREY SHRIKE (*Lanius e. excubitor*).—A single bird on November 10th.

RED-BACKED SHRIKE (*L. c. collurio*).—An immature female on September 19th.

WAXWING (*Bombycilla garrulus*).—A single bird at Fenwick on the mainland opposite on December 2nd.

SCANDINAVIAN CHIFFCHAFF (*Phylloscopus collybita abietinus*).—Three on April 22nd, two on the 24th and one on the 25th.

SIBERIAN CHIFFCHAFF (*Ph. c. tristis*).—I shot a single example on November 10th. It was too badly damaged to be sexed.

NORTHERN WILLOW-WARBLER (*Ph. trochilus evermanni*).—Many passed through between the last week in April and the third week in May. The first identified example occurred on April 25th and the last on May 21st.

YELLOW-BROWED WARBLER (*Ph. humei præmium*).—One on October 19th.

BLACK REDSTART (*Phœnicurus ochrurus gibraltariensis*).—An immature example was killed on November 10th and another was seen on the 26th.

CONTINENTAL ROBIN (*Erithacus r. rubecula*).—As there are few spring records for this subspecies it is, perhaps, worth while recording that one occurred on April 16th, several between the 22nd and 25th, while a few remained until the 27th.

MANX SHEARWATER (*Puffinus p. puffinus*).—One on May 1st and 5th, after which date several were seen.

FULMAR PETREL (*Fulmarus g. glacialis*).—Several in May and throughout the summer.

BLACK-THROATED DIVER (*Colymbus a. arcticus*).—An example in almost complete summer plumage was brought to me on Christmas Day.

TURTLE-DOVE (*Streptopelia turtur*).—One on May 16th.

WOOD-SANDPIPER (*Tringa glareola*).—A female was shot on August 30th.

GREEN SANDPIPER (*T. ochropus*).—A single bird was seen on August 20th, and a male—probably the same bird—was shot on August 25th.

LITTLE TERN (*Sterna a. albifrons*).—Two pairs, at least, remained throughout the summer.

LITTLE GULL (*Larus minutus*).—An immature female on April 14th and 15th, and another—also immature—occurred at the Longstone on August 15th.

GLAUCOUS GULL (*L. hyperboreus*).—Several appeared on December 22nd.

BLACK GUILLEMOT (*Uria g. grylle*).—One on March 24th, one on September 17th and two on October 23rd.

I desire to express my thanks to Dr. W. Eagle Clarke for the time and trouble that he has taken in separating and identifying for me the various geographical forms.

W. G. WATSON.

THE ROOSTING HABITS OF THE TREE-CREEPER.

I WAS much interested in an article by Mr. Nevin H. Foster which appeared in the *Irish Naturalist* for January, 1923, describing the habit of the Tree-Creeper (*Certhia familiaris*) of excavating small hollows in the bark of the Giant Wellingtonia (*Sequoia gigantea*) in which to pass the night. The following notes agree in the main with those made by Mr. Foster and with those of the Rev. E. U. Savage (*British Birds*, Vol. XVI., p. 284), but in view of the interest of the habit I think they may be worth recording.

Last autumn Mr. E. A. Armstrong showed me a specimen of *S. gigantea*, growing in the grounds of St. John's College, Cambridge, in which there were some ten or eleven holes

apparently scratched out of the bark, being on an average $2\frac{1}{2}$ –3 ins. long and 2 ins. deep. The holes were all lower than the lowest branches of the tree and were distributed on all sides of the trunk between about 3 and 8 ft. above the ground.

I have visited the tree frequently at dusk and have disturbed a solitary bird on two or three occasions. I watched the bird closely in one hole rather larger than the rest and saw that it rested with its head right in the hole and completely hidden from sight, only the tail and part of the back and wings being visible.

It seems extraordinary that the bird should take the trouble to excavate holes in which to roost when there are so many apparently suitable ready-made holes at hand; for not far from the sequoia mentioned there are a great many old elms offering, one would imagine, innumerable crannies suitable for roosting. Nevertheless there must be many districts where the bird is unable to find sequoias in which to roost, and I know of no other tree grown frequently in Great Britain in which the bark is soft enough to allow of excavation. In this connection Mr. F. H. Day's note (*t.c.*, Vol. XVI., p. 301) is very interesting. It is surprising, however, that the habit of roosting in rotten stumps, if a general one, has not been noticed before; a stump would have to be in the last stages of decay to be as easy of excavation as the bark of sequoia.

Mr. Foster, in the article above mentioned, draws attention to the fact that in his experience the other species of sequoia (*S. sempervirens*) grown in this country is not used by the Tree-Creeper for roosting purposes, and he attributes this to the fact that in *S. sempervirens* the branches usually come much lower down. This is corroborated by my own experience with regard to several trees of both species growing in the Botanic Gardens, Cambridge. In all these trees the lower branches are but a little way above the ground and I have only been able to find two holes. The bark of *S. sempervirens* is, however, considerably harder and thinner than that of *S. gigantea* and for this reason one would expect it to be much less suited to the requirements of the bird.

Last January I examined thirteen sequoias, belonging to both species, growing in Beauport Park, Battle, Sussex; some of them magnificent specimens. I, however, only found two trees with definite "Creeper-Holes," and only one hole (a semi-natural hollow in a specimen of *S. sempervirens*) showed signs of recent occupation. Some other hollows appeared to have been but recently excavated although they were not fouled by droppings.

The habit having now been recorded from parts as widely separated as Sussex, Cambridgeshire and Cumberland, as well as Ireland, it is evident that it must be fairly general and doubtless records will soon be forthcoming from other districts. One wonders if there is a similar habit in existence among the N. American species of *Certhia*. I have consulted several works dealing with birds of N. America and California, but have seen no mention of the habit, although a closely allied race, *C. familiaris occidentalis* Ridgw., is found, I understand, throughout the home of *S. gigantea*. I, however, came across an interesting account of the roosting of the Tree-Creeper in a book entitled "Life Histories of Birds of Eastern Pennsylvania," by T. V. Gentry, which is, I think, worth quoting. The author writes as follows: "On the outskirts of Philadelphia stands a certain hollow birch tree which has afforded lodging for half a dozen individuals of this species for several successive winters. On the return of night the birds will precipitate themselves into the cavity and there remain closely huddled *en masse* till day break."

W. H. THORPE.

HOVERING OF THE DIPPER.

IN January, 1924, while I was sitting on the bank of the Tay, waiting for Ducks, a Dipper rose from a patch of shingle, perhaps a hundred yards lower down, and flew upstream. As it approached it gradually rose higher in the air, until it was some 15 feet above the water. When about 30 yards from me, it suddenly stopped dead in the air, and began to *hover*, remaining, like a Kestrel, in exactly the same place for upwards of a quarter of a minute. Then it plunged straight into the water, at this point about a foot to a foot and a half deep, emerging after a couple of seconds; I was unable to see if it had secured anything. I waited for a quarter of an hour, then, as the Dipper showed no sign of repeating the performance, but merely fussed about the edge of the river after the usual fashion of the bird, I approached it to within five yards. It seemed to be a very ordinary specimen of *Cinclus c. gularis*. Perhaps some readers of *British Birds* have observed this habit, if indeed it be a habit, and not an individual eccentricity, but I think it must be quite rare enough to be worth recording.

SCONE.

LITTLE OWL IN LANCASHIRE.

MR. H. P. HORNBY, one of the leading ornithologists in the north of England, informs me that on April 1st, 1924, he saw

in his grounds at St. Michaels-on-Wyre, near Garstang, north Lancashire, a specimen of the Little Owl (*Athene noctua*). It was sitting on a low branch only four yards from him, close enough for him to examine the "short feet feathering," he says, "compared with Tengmalm's."

Mr. Hornby also informs me that two Owls were seen and one shot last year between Inskip and Kirkham, which were probably Little Owls, as the man who shot the specimen said that it was no larger than his fist.

Although this species now breeds in Cheshire, I can only find two authentic records for Lancashire, both recorded in *British Birds*, viz., Banks, near Southport, February, 1920, and Formby, near Southport, April 1921.

To these must be added one shot at Bretherton on January 21st, 1922, and sent to Mr. R. J. Howard, who identified it as a female Little Owl. Mitchell's *Birds of Lancashire* only mentions one, seen near Ormskirk about 1863, which is rather a doubtful record.

H. W. ROBINSON.

LITTLE OWL IN CUMBERLAND.

A LITTLE Owl (*Athene n. vidalii*) was caught in a rabbit trap at the mouth of a burrow on February 9th, 1924, at Irthington, about five miles east of Carlisle. It is the first local example I have seen, although I have had reports of "little Owls" being seen by others. No recent record of this species for Cumberland appears in the *Practical Handbook*. L. E. HOPE.

WHITE STORK IN ESSEX.

THE *Daily Mail* of March 12th, 1924, contained a letter from Miss C. Olive de Horne Vaizey of Braintree, Essex, stating that a Stork had been seen near her home.

On account of the importance of such a record I have corresponded with Miss Vaizey who kindly informs me that the bird was first seen, early in March, 1924, by her father who has some knowledge of birds and is certain of the species. The bird frequented a cattle pond some three or four hundred yards from the garden of Maysent House and as the bird could be seen from this position no attempt was made to approach closer, so as to avoid scaring the bird. There were no cattle in the field and the public do not have access to it. The bird spent hours under the south side of a hedge near the road, pluming itself and sometimes standing in the water.

Miss Vaizey gives me the following description. "The beak appeared to be a reddish-yellow, the head and underparts

white. The back slightly darker if anything and we could not see a black wing, nor were we near enough to identify properly the colour of the legs." In a second letter, in reply to my questions, Miss Vaizey writes: "With regard to the black wing, we did not notice this at first, but afterwards observed a dark patch which was probably the wing." "The neck was carried outstretched."

On the information given me I feel justified in concluding that the bird seen was a White Stork (*Ciconia ciconia*). In *The Birds of Essex* three occurrences of this species in the county are referred to, one mentioned by Yarrell as having been killed in 1852 but no locality given, and two reported to have been captured near Tillingham in January, 1879. The Tillingham record appears to be based entirely on the statement of the *Chelmsford Chronicle*. In the Victoria County History Mr. Christy quotes only the latter record. Since the publication of the county ornithology I can trace only one occurrence of the White Stork in Essex, according to *A Geographical Bibliography of British Ornithology*, one being recorded in 1892.

WILLIAM E. GLEGG.

BEWICK'S SWANS IN CHESHIRE.

A herd of ten Bewick's Swans (*Cygnus b. bewickii*) appeared on Marbury Mere, near Northwich, Cheshire, on April 2nd, 1924, and I had an excellent view of them then, and again with Mr. G. A. Carver on April 3rd.

They showed astonishing tameness and fed in very shallow water at the edge of the mere, continually "standing on their heads" as they did so. When we reached the water's edge they did not take to flight, but swam out a little way and on one occasion made a sort of gentle yelping noise.

Nine of them were pure white birds, and of the nine four had the complete black band on the culmen of the bill, while in one or two cases this band started at the base but extended only a short way downwards, and in the others was absent. The colour of the orange-yellow on their bills was the same on each bird, but several (and one in particular) had a yellow suffusion on the cheeks.

The tenth was a young bird—dusky on the head and neck and pale lemon-yellow on the bill.

Mr. T. A. Coward visited the mere on April 5th to see the Swans, but the nine white birds had gone, leaving behind the young one, which Mr. Coward picked up dead at the edge of the mere—evidently a very few minutes after its death. He

has very kindly sent me the following description of its plumage:—

Head and neck ashy-grey, darkest on crown; indication of grey on feathers of mantle and tips of tail; above the eyes and to lesser degree on cheeks—wash of dirty yellow; remainder of plumage white with here and there a slight greyish tinge.

Bill.—Black on culmen with a few small fleshy mottles; patch from eye to some way posterior to nostrils very pale straw-yellow—fading in less than 24 hours to greyish-white with very slight indication of yellow; a small patch posterior to nostrils lake-red; the fleshy mottling irregular and extending to the mandible anterior to the nostrils; rest of bill and nail black to horn.

Legs and feet.—Leaden-grey, paler on webs.

Iris.—Very dark hazel.

Weight.—10 $\frac{3}{4}$ lb. *Length.*—43 inches.

The bird is to be preserved in the Manchester Museum.

A. W. BOYD.

WATER-FOWL ON A LANCASHIRE MOSS.

PERHAPS it may be of interest to give some brief particulars of the extraordinary collection of water-fowl to be seen on a flooded moss at the head of Morecambe Bay in north Lancashire. This was once arable land intersected by wide dykes, but, owing to the pumping being abandoned during the war, is now a vast marsh.

On New Year's Day, 1923, we estimated that there were over eleven thousand head of water-birds visible, including twenty-one species, as follows: Mute Swan (*Cygnus olor*), Grey Lag-Goose (*Anser anser*), White-fronted Goose (*A. albifrons*), Sheld-Duck (*Tadorna tadorna*), Wigeon (*Anas penelope*), Mallard (*A. platyrhynchos*), Teal (*A. crecca*), Pintail (*A. acuta*), Shoveler (*Spatula clypeata*), Tufted Duck (*Nyroca fuligula*), Pochard (*N. ferina*), Goldeneye (*Bucephala clangula*), Coot (*Fulica atra*), Moor-hen (*Gallinula chloropus*), Little Grebe (*Podiceps ruficollis*), Heron (*Ardea cinerea*), Lapwing (*Vanellus vanellus*), Curlew (*Numenius arquata*), Redshank (*Tringa totanus*), Common Gull (*Larus canus*) and Herring-Gull (*L. argentatus*).

During that winter and spring I saw fifteen additional species there, making a grand total of thirty-six water-birds. The others were Bean-Goose (*Anser fabalis*), Pink-footed Goose (*A. brachyrhynchus*), Water-Rail (*Rallus aquaticus*), Great Crested Grebe (*Podiceps cristatus*), Bittern (*Botaurus stellaris*), Common Snipe (*Capella gallinago*), Golden Plover (*Charadrius apricarius*), Ringed Plover (*Ch. hiaticula*),

Common Sandpiper (*Tringa hypoleucos*), Dunlin (*Calidris alpina*), Black-headed Gull (*Larus ridibundus*), Lesser Black-backed Gull (*L. fuscus affinis*), Great Black-backed Gull (*L. marinus*), Common Tern (*Sterna hirundo*) and Kingfisher (*Alcedo a. ispida*). The reeds are so high in many parts that many other species may be present and easily overlooked. A large breeding colony of Black-headed Gulls has become established there. H. W. ROBINSON.

KENTISH PLOVER AND OTHER MIGRANTS AT A CHESHIRE SEWAGE FARM, AUTUMN, 1923.

THE settling tanks on the small urban district sewage farm, where the following observations were made, are flooded in rotation. In the autumn of 1923 four of the tanks were in a convenient position, for their southern boundary was a thick hedge which provided cover, with the light falling on the birds on the tanks.

Lapwings (*Vanellus vanellus*), Redshanks (*Tringa totanus*), and Black-headed Gulls (*Larus ridibundus*) were the most abundant and frequent visitors, the numbers varying considerably with the arrival and departure of passage parties. Redshanks were in the largest numbers during the first week of September, when most of the birds were immature. At the beginning of October one or two birds only were on the tanks, but at the end of October from twenty to thirty remained for a few days. A few pairs of Redshanks nest in the neighbourhood, and birds visit the tanks for food in summer and winter.

Dunlins (*Calidris alpina*) and Ringed Plovers (*Charadrius hiaticula*) were constant visitors; they were in the largest numbers—though never in large parties—at the end of August and in the first week of September. The last Dunlins that I noticed, a party of six, arrived on or about October 28th, and passed on almost immediately. The latest Ringed Plovers were two, one immature, on November 2nd. The majority of the Ringed Plovers were immature, with incomplete breast bands and fleshy legs.

On September 6th and 7th a single Kentish Plover (*Ch. alexandrinus*) was on the tanks. Its small size first attracted my attention, and after a careful examination through the glass I felt satisfied that its legs were really black and not stained with sludge. Next morning I was more fortunate, for I crept behind the hedge and managed to get within five yards of where it was feeding alongside

an immature Ringed Plover. There was then no difficulty of identification; the sandy-brown breast patches of the Kentish were quite different from the incomplete band of the Ringed Plover; the legs and bill were black, and the call note was softer. This is the second or third occasion on which the bird is known to have visited Cheshire. The first were the pair I saw at Marbury Mere near Northwich in April, 1908. On March 23rd, 1909, Dr. J. W. W. Stephens saw a bird resembling a Ringed Plover, but with black legs, at Hoylake, but only for a few seconds, and he did not feel sure enough to record it. A later record for Marbury, on the authority of a gamekeeper, cannot I fear be accepted as proved. The Kentish Plover is very rare on the western shores of Britain. In 1912 Major Fox-Pitt told me that he shot a bird in Anglesey in the autumn of 1911, and that it was satisfactorily identified.

To my surprise I did not see a single Common Sandpiper (*T. hypoleucos*) on the tanks, even when passage parties were frequent on the neighbouring meres and streams, but Green Sandpipers (*T. ochropus*) visited the farm between the 22nd of August and the 13th of October. How many individuals occurred I cannot say, as one or two may have made lengthy visits, and I never saw more than one bird at a time.

The Wood-Sandpiper (*T. glareola*) was present on two occasions—a mature bird on October 4th, and a bird in first plumage on October 27th. Mr. Charles Oldham and Mr. Travers Hadfield were with me on this later date.

I saw a single Curlew-Sandpiper (*C. testacca*) on September 6th, and four, accompanied by a Little Stint (*C. minuta*), on September 22nd. A Greenshank (*T. nebularia*) was reported to me on one or two dates, but I only saw one myself, on September 7th.

A Ruff and two Reeves (*Philomachus pugnax*) were feeding with the Redshanks on September 6th and 7th, and on October 4th two Ruffs and a Reeve were on the sludge.

Golden Plover (*Ch. apricarius*) are regular autumn to spring visitors to fields within a few miles of the farm, but I only noticed single birds on the tanks on two occasions. On December 15th the only wader visible was a mature Grey Plover (*Squatarola squatarola*), a winter visitor rather than a passage migrant.

Snipe are resident and regular winter visitors; passage birds were most numerous in October. I did not see a single Jack-Snipe (*Lymnocyptes minimus*).

An immature Sheld-Duck (*Tadorna tadorna*) was on the tanks at the end of September.

Large numbers of passerine birds visit the farm, and Wagtails and Pipits feed on the mud; Yellow Wagtails (*Motacilla flava rayi*) were numerous until the third week in September and passage Pied Wagtails (*M. alba yarrellii*) remained a little later. Greys (*M. cinerea*) were frequent visitors. Throughout September one or two small parties of White Wagtails (*M. a. alba*) frequented the pastures on the farm rather than the tanks; I saw the last, six birds, on October 13th.

T. A. COWARD.

THE RUFF—AN EARLY RECORD.

WITH reference to Mr. W. H. Mullens's article, "The Ruff—an Early Record" (Vol. XIII., pp. 13–20, and notes thereon, Vol. XIV., pp. 68 and 259), which deals with a black letter pamphlet of 1586, the following information may be of interest.

Mr. R. T. Gunther in his "*Early British Botanists and their Gardens*," 1922, p. 265, quotes an extract from the diary of Richard Shanne [or Shann] which refers to the occurrence of the Ruff near Crowley, in Lincolnshire, in 1588. Mr. Gunther hazards the opinion that "Shanne's is probably the first English description" of the species; but the black letter pamphlet, published anonymously and mentioned above, also deals with the taking of Ruffs "at Crowley in the Countie of Lyncolne in 1586," that is, two years earlier.

I quote the following from Mr. Gunther's book where he states that this "extract from Shanne's diary was made by Antony Wood when he consulted it in October, 1674, by permission of the then owner"—

"Anno 1588, there was taken at Crowley in Lincolnshire in the winter time 5 strange fowles of divers colours, having about their necks as it were great monstrous ruffs, and had underneath those ruffs certaine quills to beare up the same, in such a manner as our gallant dames have now of wier to beare up their ruffs (which they call *supporters*). About their heads they had feathers so curiously set together and frised, altogether like unto our nice gentlewomen who do curle and frisle their haire about their heads. Three of these strang fowles was brought into Sir Henrie Leese, and they would walk up and doune the hall as if they were great states, and sometimes they would stand still and lay their heads together as if they were in secret counsell. It made

the beholders to wonder therat. They cast them corne to eat, but they refused to tast of any meat and so at length died. Mr. Richard Shann, of Wodrow in Medley, Yorks., drew a picture of one of them which he placed in his herball. Two men that had set lime twigs to catch birds withall did find them taken therein. The like never seen or heard of before."

If Shanne's story of 1588 be compared with that of 1586 given in the anonymous pamphlet it is clear that the two stories are the same, and the only discrepancy that deserves the higher criticism is the date.

I have consulted Shann's original manuscript in the British Museum* where the date is clearly 1588 and naturally this has been copied both by Anthony Wood† and Mr. Gunther‡ though it may be remarked here that neither of these writers quote Shanne's manuscript word for word. Three questions present themselves:—(a) Did Shann witness in 1588 what someone else had seen in 1586? (b) Did Shann enter in his diary for 1588 an event which occurred two years earlier? or (c) Did Shann himself write the anonymous pamphlet? I think the first question must be answered in the negative since the stories of 1586 and 1588 are so remarkably alike. Much as I should like to be able to discover sufficient evidence to enable me to answer the third question in the affirmative I fear that the reply to the second question supplies the solution of the problem: that is that Shann must wrongly have attributed the date 1588 to an event which occurred in 1586 if indeed he was not acquainted with the pamphlet published anonymously in that year.

In conclusion I may add that I am not aware that any printed works by Richard Shanne (or Shann) are in existence; but a certain amount of information about him will be found in Mr. Gunther's book (above referred to) where it is stated (p. 264) that he was born on 10th August, 1561, that he lived near Methley in Yorkshire and that he died in 1627.

HUGH S. GLADSTONE.

*Brit. Mus. Add MSS. 38599, fol. 66.

†Bodleian Library, Oxford, Wood MS. D. 18, fol. 108, and *The Life and Times of Anthony Wood*, Vol. II., 1892, p. 302 (printed for the Oxford Historical Society).

‡R. T. Gunther, *Early British Botanists and their Gardens*, 1922, p. 265.

LITTLE GULL IN ESSEX.

I SAW near Bradfield, Essex, on April 17th, 1924, what I take it was a Little Gull (*Larus minutus*) in almost complete nuptial plumage.

The bird's flight was slow and Tern-like, almost butterfly-like. The head was black with white flecks. The beak very dark except at the angle of the mouth, which was red. The feet bright sealing-wax red. The wings black underneath, primaries white above. Tail pure white.

The bird was alone and there were no other Gulls about with which to compare it, but it was very small and I do not think I am mistaken in my identification.

WALTER B. NICHOLS.

GREAT BLACK-BACKED GULLS IN LONDON.

THE somewhat unusual occurrence of a party of seven adult Great Black-backed Gulls (*Larus marinus*) on the river at Westminster on the morning of April 14th, 1924, may be worth recording. I first saw them a little before high-water when they were the only Gulls in view on that stretch of the river. They remained soaring, wheeling, and dipping for floating morsels of food, between Lambeth and Vauxhall bridges, till an hour or more after the turn of the tide, then disappeared. A southerly gale had been blowing during the night.

H. A. F. MAGRATH.

NESTLING DOWN OF CARRION-CROW—CORRECTION.—Mr. R. H. Brown writes that his statement (on p. 222 of Vol. XVII.) that the nestling Carrion-Crow is "covered slightly with black down" should read "covered slightly with greyish-white down."

PIED FLYCATCHER IN BERKSHIRE.—Miss J. Van de Weyer informs us that she and her sister identified a male Pied Flycatcher (*Muscicapa hypoleuca*) in Hungerford Park on May 1st, 1924. As the bird was not to be seen on the following day it was doubtless on passage. The bird is seldom seen in Berkshire, the last record being on May 22nd, 1917, near Northmoor Lock (see *Report of Oxford Ornith. Soc.*, 1915-1922, p. 19).

CUCKOOS RETURNING TO THE SAME SUMMER QUARTERS FOR SIX AND FIVE YEARS.—Major B. Van de Weyer writes us that a Cuckoo (*Cuculus c. canorus*), which from its peculiar "broken" note he considers to be undoubtedly the same

individual as previously recorded (Vol. XVI., p. 107), has returned for the sixth consecutive year to Hungerford Park, Berks, and was heard on April 19th, 1924 (*cf.* also Vol. XVI., p. 190, and Vol. XVII., p. 23). Mr. T. L. S. Dooly also writes that the Cuckoo with the unmistakable note which he recorded (Vol. XVI., p. 190) has again returned to Formby, Lancs., this year (1924), making at least the fifth year.

LESSER BLACK-BACKED GULL BREEDING IN YORKSHIRE.—Mr. F. Snowdon records (*Nat.*, 1923, p. 403) that Mr. R. S. Frank and he have in recent years repeatedly seen adults of *Larus f. affinis* at the cliffs near Kettleless in the breeding season, but until 1923, when they saw a bird sitting on a nest and later found two young, they had been unable to prove breeding. Other adult birds have been seen which were probably breeding but the nests were not located.

LETTERS.

THE "NORMAL" CLUTCH OF EGGS.

To the Editors of BRITISH BIRDS.

SIRS,—Professor Wm. Rowan's statement (Vol. XVII., p. 291) that "of scores of nests of the Meadow-Pipit (*Anthus pratensis*) found on Skipton Moors, I never saw one containing more than four eggs," is contrary to my experience in this district, which is at no great distance from Skipton Moors, which I also know quite well.

The percentage of clutches of five eggs in the nests of the Meadow-Pipit found in this district during the last eight years is thirty-seven. I have found nests containing six eggs, but only very rarely.

E. P. BUTTERFIELD.

BANK HOUSE, WILSDEN, *April 8th*, 1924.

PROTECTION OF THE LAPWING.

To the Editors of BRITISH BIRDS.

SIRS,—It is generally agreed that the Lapwing (*Vanellus vanellus*) is one of the best friends of the farmer, but there appears to be a divided opinion as to whether the taking of "Plovers' eggs" up till 15th April is detrimental, or beneficial, to the welfare of the species. Those who hold the latter belief urge that the chicks hatched from eggs laid before 15th April come into being at a time when insect life is scarce and when climatic conditions may prove to be adverse to them, and they argue that so far from decreasing the numbers of the Lapwing the taking of their eggs up to the date named is actually of benefit to the stock. I know it has often been stated that prior to 15th April the eggs are an easy prey for Crows and other vermin (through absence of protective vegetation) and that agricultural operations, such as harrowing and rolling, destroy numbers of the early-laid eggs; such statements, however, do not supply an answer to the question.

It seems very desirable that a definite decision should be arrived at by the consensus of opinion of those best qualified to judge. As I believe your magazine has the widest circulation of any purely ornithological publication I am sending this letter in the hope that readers of the magazine will favour me with their individual opinions. The queries that I put before them (solely as regards the protection of the Lapwing in Great Britain) are simply :—

- (1) Do you consider that if the taking of Lapwings' eggs were altogether prohibited the species would benefit?
- or (2) Do you consider that the taking of Lapwings' eggs up to April 15th is detrimental, neutral or beneficial to the species?

A signed post card addressed to me answering the questions in a word or two will be sufficient for me to gauge the consensus of expert opinion which I so much desire and which I hope eventually to publish.

An investigation such as this must have some finality and I therefore propose to close this enquiry on 1st August, 1924, before which date I shall welcome replies as above indicated.

HUGH S. GLADSTONE.

CAPENOCH, THORNHILL, DUMFRIES-SHIRE.

BREEDING-HABITS OF RED-LEGGED PARTRIDGE.

To the Editors of BRITISH BIRDS.

SIRS,—In his note on this subject (Vol. XVII., p. 315), Mr. M. Portal asks for comments on his observations on this species, and the following are what we have noted. Many years ago we saw that only the hen used to attend to the young, and that after the hen began to sit the cock appeared to take no further notice of her. We also noticed at the same time small coveys of Red-legged Partridges which we then took to be either unpaired birds, or birds which had lost their nests. Later on in the season, however, we used to see the cock again with the covey. When living and travelling in Morocco the Barbary Partridge (*Alectoris barbara*), which abounded in many parts, and in the Great Atlas, in extraordinary numbers (never being killed by the natives), we used to shoot individuals of these coveys all through the summer for the pot, and all were males. Females with their broods were common, but quite separate. It is, of course, possible that the males may act occasionally as described by Mr. Portal, but a cock Pheasant will occasionally incubate! and will often help rear a brood. I have carefully overlooked these small parties of Red-legs here in summer, and so far as one can see with field-glasses, all are males. No doubt many others have made the same observations.

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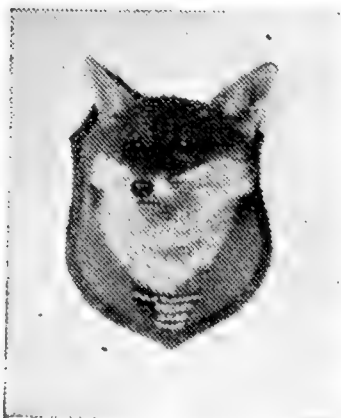
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THE MIGRATIONS OF THE HERRING-GULL AND LESSER BLACK-BACKED GULL : RESULTS OF THE MARKING METHOD.

BY

A. LANDSBOROUGH THOMSON, O.B.E., D.SC.

THE writer is again indebted to Mr. H. F. Witherby for an invitation to work up part of the data of the *British Birds* Marking Scheme, combining them for this purpose with the corresponding results of the Aberdeen University Inquiry and with such foreign records as have been published. He would gratefully acknowledge the helpful advice given by Mr. Witherby, in addition to his having provided the *British Birds* material, during the preparation of this report.

The principal data to be dealt with are the results obtained in the course of the two British marking schemes in the case of the Herring-Gull (*Larus argentatus*, Pontopp.) and the Lesser Black-backed Gull (*Larus fuscus*, Linn. : British race *L. f. affinis*, Reinh.). A part of the *British Birds* data has already been provisionally summarised by Mr. Witherby (*British Birds*, 1920, Vol. XIII., p. 311), and others of the records have received individual mention in these pages ; the whole of the Aberdeen University data, which includes no records for the Lesser Black-backed Gull, has been fully published by the present writer (*Ibis*, 1921, XI. Ser., III., p. 495). The object now in view is to deal with all the British data for the two species together, with notes on the foreign data, and to draw such conclusions from the summary as may seem justifiable.

It was thought that these two species of Gull could with advantage be treated together and that an interesting contrast would be shown. The two birds are of similar size and habits and have both been marked under similar conditions in the same general area and in fair numbers ; they are therefore likely to be recovered in about the same proportion of cases and in ways which will render the results closely comparable.

The number of birds marked and recovered are as follows :—

	Marked.	Recovered.	Recoveries per cent.
Herring-Gull :—			
<i>British Birds</i> ...	527	15	2.8
Aberdeen University	461	25	5.4
	<hr/> 988	<hr/> 40	<hr/> 4.0

	Marked.	Recovered.	Recoveries per cent.
Lesser Black-backed Gull :—			
<i>British Birds</i> ...	3,821	153	4.0
Aberdeen University	44	0	—

The *British Birds* figures are for birds marked up to the end of 1922, and for birds recovered to the date of completing this paper for press ; the Aberdeen University figures may be regarded as final and complete in both respects. A few recovery records have been excluded from the figures, and from further consideration, on account of imperfection or uncertainty. These include some cases in which the marker admitted strong doubt as to the species, and in which the recovered bird was not obtained for identification. It must be mentioned, however, that a very slight element of doubt as to the species applies generally to a large part of the records here ascribed to the Lesser Black-backed Gull. Very many of the birds were marked as chicks at a nesting colony at Foulshaw, Westmorland, largely owing to the energy of Mr. H. W. Robinson, who stated that a few pairs of Herring-Gull nest on the same ground. (For various seasons which are material for our present purpose, the numbers of Herring-Gulls present were estimated by Mr. Robinson at figures ranging from two to twenty-five pairs, at the worst a very small admixture to a large colony of the other species.) As the chicks cannot be distinguished, a possible source of slight error is introduced ; it is entirely insufficient to invalidate the general picture presented by the results, but it constitutes a special reason for laying no stress on isolated records which appear to be exceptional. To select for exclusion for this reason such records as are apparently exceptional would, however, be to beg the question as to the migratory habits of the species, and the data are in this respect, accordingly, presented as they stand.

It will be observed that the recovery percentage is practically the same for the two species. One would have expected a rather higher figure in the case of the Herring-Gull, as the chances of hearing of recoveries in the British Isles, from which this species scarcely wanders, should be greater than the chances of hearing of recoveries abroad. The variation between the two sets of Herring-Gull figures, however, warns us not to stress a point of this kind except when dealing with a very large experience. That so many of the Portuguese recoveries of Lesser Black-backed Gulls have been brought to light is largely due to the active inquiries of Mr. W. C. Tait of Oporto.

THE HERRING-GULL (*Larus argentatus*).

Of the Herring-Gulls which were marked as nestlings and subsequently recovered, most fall under two headings, namely, those marked on the Aberdeenshire coast and those marked on the east coast of Ross-shire and Caithness (notably by Miss A. C. Jackson, now Mrs. Meinertzhagen). The results may be summarised in tabular form, as follows:—

SUMMARY OF RECOVERY LOCALITIES OF HERRING-GULLS MARKED AS NESTLINGS IN THE NORTH OF SCOTLAND.

(Records subsequent to the bird's first season are shown in italics.)

	Marked in Aberdeenshire (Aberdeen University)	Marked in Caithness and Easter Ross (<i>British Birds</i>)
July	—	<i>Ross-shire</i>
August	Banffshire <i>Nairnshire</i>	<i>Co. Waterford, Ireland</i> Ross-shire Banffshire
September	Aberdeenshire Aberdeenshire Co. Durham Yorkshire Lincolnshire Monmouthshire	Aberdeenshire Aberdeenshire Calais, France <i>Yorkshire</i>
October	Heligoland Fifeshire Fifeshire Lincolnshire Norfolk	Argyllshire Lanarkshire
November	<i>Co. Durham</i> <i>Yorkshire</i>	—
December	—	—
January	Lancashire	Inverness-shire
February	Norfolk	—

(From this summary there has been excluded one Ross-shire bird found at the same place in December but thought to have been dead for some months. Two of the Aberdeenshire records refer to a single bird, which was caught in Lancashire in January of its first winter, was released six weeks later, and recorded in Nairnshire in August two years afterwards.)

Other records of Herring-Gulls marked as nestlings but not falling within the two series dealt with are as follows:—One marked in the Outer Hebrides and recovered there in December of its first year, one marked in Berwickshire and recovered there in the following summer, and three marked in Wales

and recovered in their first winter—two in December at short distances from the place of marking, and one in January in co. Dublin.

Taking all these records together and considering the distances travelled and the dates of recovery, the following analysis of the records expresses the chief facts in simple form.

ANALYSIS OF RECOVERY RECORDS OF HERRING-GULLS MARKED AS NESTLINGS IN GREAT BRITAIN.

(Figures for records subsequent to the bird's first season are shown in brackets.)

	Distance from Place of Marking.			Total
	0-200 miles	200-400 miles	400-600 miles	
July	(1)	—	(1)	2
August	4 (2)	—	—	6
September	4	2 (1)	3	10
October	4	2	—	6
November	(1)	(1)	—	2
December	3	—	—	3
January	1 (1)	1	—	3
February	—	1	—	1
	21	8	4	33

There remains a series of records of Herring-Gulls marked otherwise than as nestlings. This is the outcome of the marking of 86 full-grown birds which were caught at night on the sea-shore near Aberdeen, ringed on the spot and released, by the late 2nd Lieut. L. N. G. Ramsay, the late Lieut. A. G. Davidson and the writer; this was achieved by approaching the birds with bright lamps. The series is not a large one, and it will suffice to give simply the following particulars of the recoveries, all of which refer to birds marked in either September or October, 1910.

A.U. No.	Date of Reappearance.	Locality of Reappearance.
15901	15.11.10	Aberdeen
16075	{ 20.5.11 (and released)	Burray, Orkney
10506	{ 11.7.13 26.6.11	Nr. Aberdeen
16017	7.3.12	Aberdeen
10589	6.5.12	Aberdeenshire
15985	27.6.13	Asaa, east coast of Jutland, Denmark
15891	28.4.14	Gera, Thuringia, Germany Caithness

It is more than probable that the birds marked in this group represented a mixture of native Aberdeenshire birds, of birds from more northerly parts of Scotland, and of visitors from the Continent. The recovery records themselves suggest this, but no further conclusion can safely be drawn. The distances to Asaa and to Gera are, respectively, 485 and 730 English miles.

FOREIGN RECORDS.

Skovgaard has published ("Maerkede Havmaager," 1921, *Danske Fugle*, II., 65), an excellent series of records for the Herring-Gull. From 1917 to 1921 nestlings to the number of 1,177 were marked in a colony on the island of Fanö, near Esbjerg, at the south-western corner of Denmark. Of these, exactly 100, a large proportion, were recovered in the first year of life. The records are all for Denmark and the neighbouring parts of Germany. Forty-nine were recovered within a circle of 10 kilometres (*ca.* 6 miles) radius, having Esbjerg harbour as its centre, and 13 more within a slightly wider area taken by the author as the home region; the remainder were recovered at greater distances, but all within 250 kilometres (*ca.* 155 miles). The following table of the monthly incidence of the records is given:—

	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Near place of marking	5	34	11	6	2	1	1	1	0
At a distance	0	5	10	11	0	4	6	1	1

Dispersal took place northwards and southwards in approximately equal degree.

Mortensen had also obtained some records for birds of this species marked in Denmark, and these have been published in a posthumous paper ("Maerkede Maager," 1922, *Dansk ornith. Foren. Tids.*, XVI., 76). They showed no greater movement than the larger Danish series described above. Van Oort has published ("Bird Marking in the Netherlands," 1911-13, *Notes from the Leyden Museum*, XXXIV., 56; XXXIV., 249; and XXXV., 213) records of birds marked as nestlings in Noord Holland; these show no movement further than to Belgium and North-eastern France, South-eastern England (Kent), and Heligoland. Little movement is shown by the records of birds marked in Northern Germany which have been published by Thiene-mann ("Jahresberichte der Vogelwarte Rossitten," *J. f.*

Ornith., annually) and by Weigold ("Jahresberichte der Vogelwarte Helgolands," *J. f. Ornith.*, annual series, but replaced during the war period by reports by Krüss); but one bird marked at Rossitten was recovered two months later in Denmark at a distance of 330 miles. Two Herring-Gulls with Rossitten rings were recovered after eleven and after thirteen years respectively.

THE LESSER BLACK-BACKED GULL (*Larus fuscus*).

The whole of the data of the *British Birds* scheme which relates to this species must relate to the British race, *Larus fuscus affinis*, all the birds having been marked as nestlings in Great Britain. With two exceptions all the records refer to birds marked either on the Farne Islands, off the coast of Northumberland (notably by Miss A. Pease), or at Foulshaw, Westmorland, chiefly by Mr. H. W. Robinson, as already stated, each place providing about half the total of records. (One marked in Anglesey, Wales, was recovered in the North of England, and one marked on the Scilly Isles, off Cornwall, was recovered in Portugal.)

The recoveries took place mainly in autumn and winter and particularly, as usual, in the first few months of the birds' lives. Apart from the six northernmost counties of England, which may be conveniently taken as the native area of the birds, relatively few were recovered in the British Isles; these included five further south in England and Wales, one (from the Farne Islands) in County Mayo on the west coast of Ireland in October of its first year, and one at Grantown-on-Spey, Morayshire, Scotland, in August of its second year. One from Westmorland was, curiously, recovered in September of the year of marking at Haugesund on the west coast of Norway. Attention has already been drawn, however, to the special reason which exists here for laying no stress on isolated records of an apparently exceptional kind.

All the other records refer to southward migration. The series begins with one record from the Gulf of St. Malo, on the Channel coast of France, and then follows, southwards, the west coast of France, the north and north-west coasts of Spain, the coast of Portugal, and the south-west coast of Spain to the Strait of Gibraltar. From there one series continues into the Mediterranean, where there are three records from the south-east coast of Spain, two records from the coast of Algiers, and one record from the northern end of Sardinia. Another series continues southwards, and there are two records from the coast of Morocco and the Rio de Oro, one

record from the Canary Islands, and one from St. Louis, Senegal, 16° 1' N. lat. (There is no definite proof that some or all of the birds reaching the Mediterranean did so by way of Gibraltar and not, say, by crossing France from the Gironde estuary to the Gulf of Lions, but there is a complete absence of records from any distance inland. The absence of records from out at sea has of course no significance.)

The numerous Portuguese records are well distributed along the whole coast of that country. It seems unnecessary to give any list of the localities; many of them have already been named in these pages on former occasions and a nearly complete list* has also been recently published in Mr. W. C. Tait's *Birds of Portugal* (London, 1924).

The following table gives an analysis of the records by months and regions of recovery.

ANALYSIS OF RECOVERY RECORDS OF LESSER BLACK-BACKED GULLS MARKED AS NESTLINGS IN GREAT BRITAIN (ALL EXCEPT TWO EITHER IN WESTMORLAND OR ON THE FARNE ISLANDS).

Month of Recovery	North of England.	Remainder of British Isles	Norway	France	Portugal and Atlantic coasts of Spain	Mediterranean coasts	West coast of Africa	Total
May ...	4	—	—	—	—	—	—	4
June ...	1	—	—	—	—	—	—	1
July ...	2	—	—	2	1	—	—	5
August ...	10	2	—	5	—	—	—	17
September	23	2	1	3	8	—	—	37
October ...	12	2	—	2	15	—	—	31
November	3	—	—	—	16	2	1	22
December	2	—	—	—	6	2	1	11
January ...	1	—	—	—	5	1	1	8
February	—	—	—	1	3	—	—	4
March ...	1	—	—	—	7	—	—	8
April ...	1	—	—	2	—	1	1	5
Total ...	60	6	1	15	61	6	4	153

It will be observed that in spite of the good chances of any recoveries being brought to notice there are almost no winter

*One bird, B.B. 36561, is stated in error to have been marked in Cumberland instead of on the Farne Islands. There is also included a record of a bird, Rossitten 24604, marked in Germany and recovered in Portugal; according to Thienemann (*loc. cit.*), however, this was a Black-headed Gull (*L. ridibundus*).

records from the British Isles—three in November, two in December (both at the beginning of the month), and one in January. Attention must again be drawn to the special reason which exists here for not laying stress on isolated records of an apparently exceptional kind, and in any case the proportion of British winter records is quite negligible. The absence or great infrequency of British winter records would appear to constitute negative evidence of a kind on which one may safely rely; the infrequency of British summer records, other than in the premigratory period of the first year, has of course to be taken in relation to the small total number of recorded casualties at that season.

Apart from the *British Birds* inquiry there is a further record of a Lesser Black-backed Gull marked on the Farne Islands and recovered in December of its first year in Portugal (*Country Life*, November 27th and December 12th, 1909).

FOREIGN RECORDS.

Records of Lesser Black-backed Gulls caught and marked in autumn at Rossitten, at the south-eastern corner of the Baltic Sea, have been published by Thienemann (*loc. cit.*). Many of these birds were recovered at no great distance, usually soon afterwards, but in one case after as much as nine and a half years; of the remainder, some had travelled westwards to as far as Denmark and others southwards. These last are of special interest. One, which was marked (at Hela, near Danzig) in September and was recovered in December in Calabria, Southern Italy, may or may not have reached there by way of the Atlantic coasts of Europe, but other records clearly indicate the occurrence of overland journeys. One bird was marked in October and recovered a month later at Plauen, Saxony, 470 miles south-westwards; another was marked in November and recovered thirteen days later at Saromberke, South-eastern Hungary, 620 miles southwards; and another was marked in early November and recovered twenty-two days later at Belgrade, Serbia, 730 miles southwards. Another was marked in October and recovered in the following May at Damietta in the Nile Delta.

There are also a few records of Lesser Black-backed Gulls marked with Rossitten rings elsewhere than in Germany. One marked as a nestling on Öland, Sweden, on June 24th, 1912, was recovered in Essex on February 24th, 1914; two marked as nestlings on Strömö, Faroe Islands, were recovered in winter in Portugal and near Casablanca, Morocco, respectively.

CONCLUSIONS.

It will be of interest to set out in parallel columns the main conclusions that can be drawn from the foregoing summary of the data for the two species. It is to be noted, however, that in the British Isles the one species has been marked mainly in the north of Scotland and the other in England; it would be useful to have supplementary data for the opposite region in each case.

Larus argentatus.

(1) Herring-Gulls native to the north of Scotland tend to wander southwards in autumn, but within the limits of the British Isles and the immediately surrounding seas. The greatest distance travelled is scarcely 600 miles, the furthest points on record being co. Waterford, Monmouthshire, Heligoland, and Calais.

(2) The movement shows no special regularity with regard to dates or directions.

Larus fuscus.

(1) Lesser Black-backed Gulls native to the north of England migrate southwards in autumn by way of the coast of France to the Atlantic seaboard of Spain and Portugal and North Africa, as far as Senegal (about 3,000 miles), also penetrating the Mediterranean as far as Sardinia. A single record for the west coast of Norway (in September) stands by itself as exceptional. The number recorded in the British Isles in winter is negligible.

(2) The British records become very few after October, and there are also no French records between that month and February. Apart from a single record in July, the records for the Atlantic seaboard of Spain and Portugal cover the period September-March, with the maximum in October and November. Apart from one record in April in each case, the records from the Mediterranean and from the west coast of Africa fall in the period November-January.

Larus argentatus.

(3) The movement appears to have the character of a dispersal; every gradation of distance is shown, and the numbers of records decrease as the distances increase.

(4) Herring-Gulls native to Denmark, Holland and Northern Germany appear to be migratory in even less degree, nearly all the records falling well within 200 miles of the place of marking. The Danish records also very clearly show that the movement is a mere dispersal. Herring-Gulls marked in Scotland in autumn, and possibly native to the Continent, have been recovered in summer in Denmark and in Central Germany at distances of 485 and 730 miles.

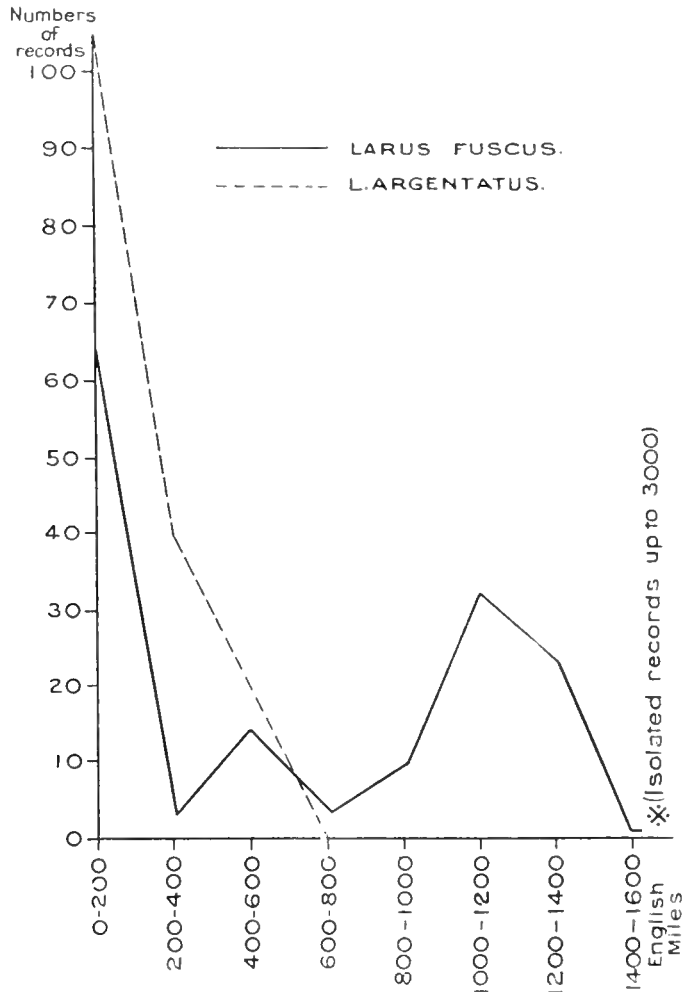
Larus fuscus.

(3) The movement appears to have the character of a definite migration. There are few records from what may be called intermediate distances, relatively few birds being recovered in other parts of the British Isles than the area of marking, as compared with the numbers recovered in the area of marking and at greater distances respectively.

(4) Records of birds marked in autumn at the south-eastern corner of the Baltic Sea indicate that migration takes place both westwards along the coast and southwards overland to the Eastern Mediterranean. A bird native to Southern Sweden has reached England, and birds from the Faroe Islands have reached Portugal and Morocco.

The records thus provide further evidence of the different migratory status of the two species. A point of special interest which is brought out is that the movements performed differ not only in degree but also in kind; in the one case we have a mere dispersal and in the other a definite migration. This difference is clearly shown if the numbers of records be analysed according to distance from the point of origin, irrespective of direction or season, in belts of a width of, say, 200 English miles each. The number of records for the Herring-Gull falls steadily from belt to belt outwards. The number of records for the Lesser Black-backed Gull falls even more rapidly at first, is low in several succeeding belts, and then rises notably as the region of winter-quarters

is reached, finally falling away towards the extreme limit of range. This double-peaked curve is typical of true migration; it marks the existence of two distinct seasonal areas with an intervening tract which provides few records and which may therefore be supposed to be speedily traversed.



DESCRIPTION OF DIAGRAM.

Recovery Records of Lesser Black-backed Gulls (*Larus fuscus*) and Herring-Gulls (*Larus argentatus*) marked as Nestlings in Great Britain; grouped according to distance from birthplace.

The diagram shows for each species the number of recovery records, irrespective of season or direction, in each belt of 200 English miles measured from the place of birth. (For the Lesser Black-backed Gull 153 records were available; for the Herring-Gull there were only 33 records, and each record for this species has accordingly been taken as equivalent to five of the other, thus giving the comparable total of 165.)

COURTING DISPLAY OF THE FULMAR.

BY

HENRY BOASE.

DURING the spring of 1922, and also in March, 1923 and 1924, on the coast of Forfarshire, the courting actions of the Fulmar (*Fulmarus g. glacialis*) were watched on several occasions during the afternoon. In spite of the time of day, the birds showed quite marked activity when the weather was mild; cold and a grey sky seemed to depress them, and their behaviour during wind was not observed.

The first display seen was probably between a mated pair, on March 18th, 1922. The pair were sitting side by side on a narrow ridge facing the same way. The outer bird appeared to be the male. He opened the bill wide and, throwing back the head, putting head and neck in line vertically, called a muffled "ag-ag-ag" or "ak-ak - - -," turning the head from side to side as he did so. The female replied with similar gestures but apparently did not call. Sometimes both displayed at once. The male also made feint of biting the other, and was met by similar sham attacks.

A somewhat similar display was seen on March 10th, 1923, where again a pair were seen sitting side by side on a ledge, the feet showing under the breast. This pair made more show of the "bite" display, making elaborate pretence; once the bird judged to be the female appeared to nibble the wrist joint of its mate's nearer wing. While so engaged, a third individual succeeded in landing on a ledge just below this pair and, with open bill and outstretched neck, tried to climb up to the pair above. The male of the pair, without shifting his position, greeted the stranger with gaping beak and outstretched neck, swinging from side to side and up and down, and was assisted, but less vehemently, by similar behaviour of his mate, whereupon the stranger departed. Calls could not be made out owing to the wind.

Meanwhile, a single bird on another ledge was making a display alone. In this instance, the bird, squatting as usual, was carrying out the usual form, head and neck extended in line upwards, bill wide open and the head turning from side to side, but developed this further by leaning right back with the neck in a curve over the back, bill still wide open but held more normal to neck, and the head turning from side to side slowly with the neck swaying in sympathy. Probably it was calling, but the clamour of the Herring-Gulls masked the sounds. In this instance, and perhaps in most cases, the

neck seemed as though expanded or inflated, particularly the fore part, and a marked line in the plumage developed at the base of the jaw. This solitary bird was joined by another which made similar display while squatting before the other, carrying out the same slow movement from side to side with the head back, during which performance the first bird remained unmoved. Below, in a chimney, two Fulmars were endeavouring to land beside a third clinging to a patch of sloping turf, which at times gave the display described above but slightly modified owing to the difficulties of the situation.

These birds also used another form of the display, where the extended neck and head in line are swung up and down and from side to side, both movements being combined and the latter usually slow. This display is accompanied by a call "urg - - -" or "ug - - -" repeated as a cackle, and later proved to be the most usual form used. Probably its fullest development was seen in the following performance witnessed on March 24th, 1923. When first noticed, the two birds were squatting some little distance apart on a ledge, both at rest and facing the same way. The one (judged to be the male by the more evident colour of the tube of the beak) began the display, swinging the outstretched head and neck (beak open wide) from side to side and up and down, the tail shaking in sympathy. The note uttered appeared to be the "uk-urk-urg-ug" cackle. The other bird turned round to face the male and the motion became more formal. The swing from side to side almost ceased and the swing up and down decreased in amplitude and increased in rapidity, accompanied by similar motions of the tail, until it ceased in a shudder, the bird remaining stiffly posed for a final fraction of a second with head and neck and widely gaping bill extended in line almost horizontally. The performance further included a variation of the first form described, the display ending with the return of the head normal to the neck and swinging forward in a series of jerks as though in a paroxysm of sickness. The appearance of enlargement of the neck was particularly noticeable in this case. The other bird, presumably a female, remained passive during this performance, merely turning the head from side to side admiringly. The male then shuffled nearer its mate and made sudden darts at her neck, snatching at the feathers with his beak, to which the female replied by parrying with feint of biting but not darting. Later, the male withdrew a little way and the female suddenly began to display to the male, going through the same swinging and waving of the extended inflated neck and widely gaping beak,

but did not give the more formal part of the male's actions nor did she move the tail. The male remained quite disinterested to all appearances. The male was roused by the landing of a third individual (whether male or female could not be determined) and the pair, sitting side by side with gaping beak and outstretched neck inclined at about 45 degrees, greeted the newcomer with a torrent of "ork-uk-urk-ug." Once or twice the pair turned to each other and feinted a few bites and turned again to apostrophise the stranger. Finally the pair quieted down and sat regarding the intruder.

The biting pretence was later seen in two developments. The one was more gentle, an actual nibbling and cossetting, sometimes mutual, of the birds of a pair. The other form touched the other extreme, for the mutual feint ended in locking of beaks and a short struggle. In this instance the normal display, in this case mutual, had been gone through. Apparently, biting pretence generally followed the more elaborate display.

Another attitude sometimes used, perhaps not clearly connected with the forms of display described, consisted of sitting with neck stiffly erect, head normal and beak closed, and the head "rolled" as it were, the bird seeming to look upwards with the one eye and then the other.

In one instance, where a solitary bird which had been displaying alone on a ledge, the single bird was joined by another with little or no greetings. At intervals, however, the original occupant of the ledge would extend the neck and make display to the newcomer, which now and then replied rather half-heartedly. In another instance, where a second bird joined another on a ledge with little interest shown, the two attacked a third arrival in no uncertain fashion. The weather at the time was cold and grey, which probably accounted for the dull behaviour of the birds.

These displays vary in form and in vigour. The difficulty of determining the sex of the birds makes the matter somewhat confusing and only in a few cases have the birds been sufficiently near to enable any slight differences to be detected. In the case of solitary birds making display, it may be that this is done to attract the other Fulmars flying to and fro. Sometimes half a dozen individuals fly round, circling in a plane steeply inclined to the sea below and reaching almost to the top of the cliff. Over the greater part of the circuit they glide with taut wings and in many cases each bird in turn may attempt to land on one or other ledge on the rock

face. Apparently, the inability to stand on the toes makes landing a difficult matter for the Fulmar, and in many cases the birds simply sideslip and tumble upon the ledge. Time after time, the birds will in turn attempt, whether in earnest or in play is not clear, to alight on some chosen spot, pausing in flight before the place selected with feet dangling, balancing the eddies in the upthrow of air with wings and tail, only to swoop once more to gather impetus and rise again to make another attempt.

In practically every case the calls were difficult to locate owing to the constant clamour of the Herring-Gulls, the crash and roar of the surf below, and the ever changing swirls of air along the face of the cliff.

THE LIGHT AND DARK-BREASTED BRENT GEESE.

BY

THE REV. F. C. R. JOURDAIN, M.B.O.U., H.F.A.O.U.

THE impossibility of defining the subspecies or geographical races of a migratory bird without series of skins from different parts of its breeding-range is clearly shown by the history of the Brent Goose in our ornithological literature.

The Brent is a common winter-visitor to our coasts, and if a series be examined it will be found that while some have the whole of the under-surface a uniform slate-grey, there are others in which a great part of the lower-breast and abdomen are white, or at any rate whitish, with ashy-brown markings on the breast and flanks. Occasionally, but rarely, birds occur which it is not easy to classify under either head.

In North America the problem is a much simpler one. White-breasted birds occur on the Atlantic side, while a much darker form (*B. bernicla nigricans*) is met with in the Pacific. This is a very distinct race, which breeds along the Arctic coast of East Asia and Western N. America, and is universally recognized, so we need not discuss it further.

But to return to the Atlantic birds, C. L. Brehm in the *Isis*, 1830, p. 996, separated four races: (1) *Bernicla glaucogaster*; (2) *B. micropus*; (3) *B. platyuros* and (4) *B. collaris*. Subsequently in the *Handb. Naturg. Vog. Deutschl.*, p. 849 (1831) he gives some details of these forms by which we are enabled to identify them. No. (1) somewhat inappropriately refers to the dark-breasted bird, as also does No. (2); No. (3) is a mere aberration with eighteen rectrices, while No. (4) is the white-breasted form.

Macgillivray, who wrote mainly from his own experience, only knew the light-breasted form. Saunders, in the 4th edition of *Yarrell* (IV., p. 293), very correctly describes the two forms, the light one from the Atlantic and the dark from Novaya Zemlya and perhaps Arctic Siberia, but at that time it was not considered necessary to name local races. Seebohm, who was in his own way a pioneer, went a step further in his *History of British Birds* (1885). He separates *Anser brenta* from the Taimyr, Novaya Zemlya, Franz Josef Land and Spitsbergen (*sic*) with dark under-parts, and *A. b. glaucogaster* from W. Greenland to the Parry Isles with white breast. Here are two serious errors. Spitsbergen is included in the

range of the dark form and the erroneous name "*glaucogaster*" is adopted.

These two errors were copied and recopied from book to book for the next thirty or forty years, and it is only quite recently that they have been detected.

In 1895 Trevor-Battye published his *Icebound on Kolguev*. Describing the great battues organized by the Samoyedes against the Geese, he distinctly states that though the majority of birds were slaty-breasted, a minority had breasts as light as mother-of-pearl. He brought home no skins in support of this statement, which was presumably written up from rough notes on the spot.

S. Alphéraky (1905), in his work on the Geese, makes the significant statement that all the birds obtained by Buturlin on Kolguev in 1902 were dark-breasted. While separating the two forms under the names of *Branta bernicla* and *B. b. glaucogaster* he repeats Seebohm's error of including Spitsbergen in the range of the first form and explains the apparent occurrence of both forms in Kolguev as a parallel with local dimorphism in the Lepidoptera. The Brent is according to him dimorphous in Kolguev (Trevor-Battye) and also on Novaya Zemlya (on the strength of one skin in the British Museum, which Salvadori ascribes to the light-breasted race, although it is not typical of that form) as well as on the Taimyr.

In the last case the only evidence is that of a single skin brought back by Middendorff from the Taimyr. In North America and Greenland on the other hand it is according to him "polymorphous," but as he explains this as meaning "only in its light-bellied form," it may be a translator's error for "monomorphous."

In the *Handlist of British Birds* these now universally accepted errors were repeated, as was also the case in the *B.O.U. List* of 1915. Meanwhile in 1912 Koenig's great work on the *Avifauna Spitzbergensis* appeared. Here Le Roi makes several references to light- and dark-breasted birds and seems to confirm the presence of the two forms on the same breeding-ground, as already recorded by Trevor-Battye for Kolguev. It is significant that in the coloured plate by Keulemans from skins sent over by Koenig for the purpose, both birds are light-breasted, though one has a good deal more grey-brown marking on the breast and flanks. These figures are intended to illustrate the two forms, but neither approximates in the least to the uniformly slaty-breasted type.

In 1917 Misses Baxter and Rintoul, finding specimens of the Light-breasted Brent in Scottish collections, appealed

for further information, as this race was then believed to be a straggler from North America. This elicited a characteristic paper from Mr. Abel Chapman, who begins by stating that "no two such forms as are presupposed exist in wild nature"—because dark, light and intermediate birds occur *in winter* in the same flocks. Then comes the remarkable statement that "Dozens of travellers in Spitsbergen and Novaya Zemlya have testified to finding Pale-breasted Brents breeding in these lands by thousands." I am not aware of the writings from which this information with regard to Novaya Zemlya is derived, but am under the impression that very few travellers have met with geese breeding there at all, and that the only light-breasted Goose from Novaya Zemlya is the dubious skin now in the British Museum. Mr. Chapman then proceeds still further to give his case away by stating that out of thirty or forty specimens killed and examined by himself in Spitsbergen in 1881 every one belonged to the light-breasted type! But J. G. Millais (*Scot. Nat.*, 1917, p. 215) proceeded to show that the statement that "Every big pack contains individuals that display every grade of colour" was only locally true, for all birds killed in Dornoch, Cromarty and Moray Firths were white-breasted. In the Tay estuary all birds seen were dark-breasted and those from the Eden estuary and Forth were also dark.

On the combined weight of this evidence of Trevor-Battye and Koenig, supported by the joint flocking on the Northumbrian coast, Dr. Hartert came somewhat unwillingly to the conclusion that the two forms could no longer be upheld as distinct, as they had been proved to breed together, and all our recent works (Addenda to *Hand-List, Vögel d. pal. Fauna* (1920), the *Practical Handbook*, the *B.O.U. List* of 1923 and Witherby's *Check-List* (1924) unite the two forms.

Let us summarize the facts. All specimens from the breeding-grounds in eastern North America and Greenland and nearly all occurring in winter on the east of North America are admittedly light-breasted. All the birds met with by Chapman in 1881 were light-breasted, as were also all those seen by us in 1921 and 1922 in Spitsbergen. Koenig's birds appear to have been also all of this race, but it is desirable that skins from his large series should be compared. It is, therefore, practically certain that all the birds breeding from Spitsbergen to the Parry Islands belong to the light-breasted form, which migrates in flocks of this race alone to the northern Scottish estuaries, meeting the stream of migratory dark-breasted birds further south. The dark race, on the other

hand, inhabits W. Siberia, the only instance of the light form being Middendorff's bird, and on Novaya Zemlya, the evidence is all in favour of the dark-breasted form with the exception of the one skin in the British Museum, which is far from being a typical light-breasted bird. From Franz Josef Land we have only one skin, which is also unsatisfactory, while on Kolguev there is the evidence of Trevor-Battye (unsupported by specimens) that some of the birds are light-breasted. All birds from the Taimyr eastward are dark (one exception recorded). On the North Russian islands the evidence is not quite satisfactory or clear and it is possible that a third and somewhat intermediate form occurs here.

But even if it be granted that there are areas in which the breeding-ranges of the two forms overlap (and so far the evidence is of the most unsatisfactory nature) does this furnish any adequate reason for uniting two forms, each of which has a vast breeding-range, extending in the case of the pale-breasted race for over a thousand miles, in which the other form does not occur or has only been recorded on a single occasion?

The question can only be solved by the acquisition of a series of skins of breeding birds from these localities. At present we have not the material to decide. With regard to the name by which these races should be known, Linnæus gave the name of *Anas bernicla* to the Brent: "Habitat in Europa boreali: migrat supra sveciam." Evidently this applies to the dark-breasted bird, but if the North Russian race is eventually separated from the West Siberian it will be necessary to restrict it to one of the two and we commend to Dr. E. Lönnberg the important duty of ascertaining upon what material Linnæus based his name.

For the pale-breasted bird Brehm's name of *collaris* seems applicable. It was originally applied to a winter visitor to the coast of Germany, but there seems no reason to doubt that the stream of migrants moving south from Spitsbergen does extend in diminishing numbers to the coasts of Holland and even to the Baltic.

NOTES

HYBRID CROWS IN FORFARSHIRE.

LAST year near Kingoldrum I visited an old Crow's nest, which I had had under observation for the previous two seasons. In 1921 it contained a clutch of seven Kestrel's eggs, all of which hatched out. The following year it was



unoccupied, but in 1923 a new lining was added, and in May I found four Crow's eggs in the nest, which was situated in a scots pine. I was unable to revisit the place until June 20th, when I found that the young Crows were almost able to fly. It was evident from their plumage that they were hybrids between the Carrion- and Hooded Crow (*Corvus corone* × *C. cornix*). Two were typical Hooded Crows, a third was smaller and quite black, while the plumage of the remaining one was a mixture of both types, the grey being much darker, particularly on the under-parts. On that day and on two later occasions I saw a Hooded and a Carrion-Crow flying together not far off, and I have no doubt that they were the

parents of this brood. I removed the young Crows and kept them in an aviary, where they lived together until February 1924, when two died. These are now in the Royal Scottish Museum, Edinburgh. After the first moult the intermediate type became rather darker and more like a Carrion-Crow, except that it still retained some lighter feathers on the breast. Although isolated examples of this hybrid are by no means rare, the finding of a nest of young showing such variation in plumage is of less common occurrence.

T. LESLIE SMITH.

MEALY REDPOLLS IN BERKSHIRE.

ON November 26th, 1923, a male Mealy Redpoll (*Carduelis l. linaria*) was captured alive in a meadow on the Berkshire side of the River Isis near Long Bridges. It was kept in the aviary of Mr. J. Sumner Marriner at Eynsham till April 2nd, 1924, when it was accidentally killed. The skin is now in Mr. H. F. Witherby's collection. Mr. Marriner has since ascertained that two or three others were taken at the same time, so that it is evident that a small flock of this species was present. There is no definite previous record for Berkshire, except that Dr. Lamb (writing about 1814) mentions *Fringilla cannabina* and *F. linaria* as occasional visitants. As he also recorded *F. spinus* and *F. linota*, J. E. Harting surmised that *F. cannabina* was "most probably the Mealy Redpoll" (*Zool.*, 1880, p. 323, footnote), but as Dr. Lamb states that it appears "only in March and April with the *Spinus* and *Linaria*, and leaving us in August," little value can be attached to the observation.

F. C. R. JOURDAIN.

TWO HEN PIED WAGTAILS SHARING SAME NEST.

ON May 10th, 1924, I found in a hole in an acacia tree in my garden, Bradfield, Essex, a nest of the Pied Wagtail (*Motacilla a. yarrellii*) containing nine eggs. On the 19th I found ten eggs. On the 23rd one egg was hatched and that evening two birds were sitting on the nest. The next day I saw the male bird feeding on the lawn close to the tree and two hens on the nest. On the 26th I went away from home and returned on the evening of the 29th. My wife told me on my return that she had spent much of her time the day before in returning young birds and eggs to the nest—and I found on examination that the nest had only one occupant, a Cuckoo, while an egg which I opened, and of which I found the yoke almost unchanged, lay at the foot of the tree.

To complete the story, I must relate that on the 20th, owing to building operations within a few yards of the tree in which was the nest, I had to give orders to have the tops of this tree and another acacia tree close to it removed. For two days two men were on this job—one in the tree sawing off the branches and the other helping in lowering them on a rope; while for another two days the men were engaged in sawing up the wood all round the two trees—yet the birds stuck to their nest, only in the end to have to rear an alien who is still “going strong.”

WALTER B. NICHOLS.

STATUS OF GREY WAGTAIL IN KENT.

THE Grey Wagtail (*Motacilla c. cinerea*) has now become a regular resident and breeds around the Maidstone district.

Owing to the few places suitable for nesting, it does not increase. This year there is a pair mating in the usual places, but so far I cannot find that it has gone wider afield for new nesting sites.

JAMES R. HALE.

SCARCITY OF YELLOW WAGTAIL.

AYRSHIRE has always been spoken of as the home, *par excellence*, of the Yellow Wagtail (*Motacilla flava rayi*); Gray mentions it as being especially common.

Last summer I reported having seen only one pair where I used to find half a dozen in a small area, whereas this year I have seen only two pairs, and one of those was on migration.

The old breeding stock seems to have entirely disappeared. This refers to an area of some ten square miles, where the Yellow Wagtail was one of the commonest of that genus. As the bird nests in hayfields where human beings rarely transgress, this shortage must be due to the bad seasons lately experienced.

E. RICHMOND PATON.

I HAVE thought that Yellow Wagtails have been decreasing in Romney Marsh, Kent, during the last four or five years. This year, 1924, there can be no doubt of the fact; the decrease is most marked, as not more than one pair is to be found in many areas where there were formerly five or six, and one can really walk long distances without seeing any.

N. F. TICEHURST.

SONG-THRUSH'S NEST USED SUCCESSIVELY BY SONG-THRUSH AND BLACKBIRD FOR THREE SEASONS.

EARLY in 1922 a Song-Thrush (*Turdus ph. clarkei*) built a nest in the garden of Patterdale Hall, near Penrith, and

reared young ; later in the same season the nest was occupied by a Blackbird (*T. m. merula*), which reared three young. In 1923 the same nest was again used by a Song-Thrush and four young ones reared. During the following winter the nest was much damaged, but in the spring of 1924 a new one was built by a Song-Thrush, which reared four young. On May 18th the nest was found to have been repaired and a Blackbird was in possession, having laid one egg. All the young birds mentioned have been "ringed."

LENORE F. MARSHALL.

LENGTH OF LIFE IN A BLACKBIRD.

As it is not often possible to get records of the length of life in individual wild birds, the following note on a cock Blackbird (*Turdus m. merula*) may be of some interest. The bird, which was distinguishable by a white spot over the left side of the nape, inhabited a corner of the garden of Newnham College, and under the nickname of "William" was well-known there for eight years. He first appeared in 1915, and, from then onwards, occupied an area of less than an acre of lawn and flower beds, enclosed on two sides by the College buildings. Even in winter he scarcely ever left this territory. He mated regularly with a normal hen and reared two broods a year whose plumage appeared normal. He began to fail in the autumn of 1923 when he moulted badly and seemed out of sorts, and finally disappeared during last winter. It may be worth mentioning that this spring another male Blackbird, marked with several white spots on the mantle, has appeared and occupies another patch of the garden abutting on the late "William's" territory.

M. D. BRINDLEY.

WRYNECK IN DEVON.

ON April 15th, 1924, I watched a Wryneck (*Jynx torquilla*) on the top of Salcombe Head, a cliff rising just east of Sidmouth, S. Devon. I believe this species has been but very rarely recorded in this part of England.

M. S. CURTLER.

EARLY LAYING OF CUCKOO IN ESSEX.

THE following account of early laying by the Cuckoo will be of interest to your readers:—

On April 26th, 1924, in south Essex, a friend and I saw a Cuckoo (*Cuculus c. canorus*) leave a blackberry bush. Upon examining the bush we found a nest, which was apparently a typical nest of the Hedge-Sparrow (*Prunella m. occidentalis*), containing a Cuckoo's egg. The nest was about 3½ feet up

and very conspicuous, as the bush was practically devoid of foliage. At the time, I was of the opinion that the Cuckoo's egg had been deposited before the nest was completed, as the usual horse-hair lining was represented by only a few hairs, and the nest had a very unfinished appearance.

The egg itself is of a very remarkable type, and quite unlike any other Cuckoo's egg that I have ever seen. Its ground-colour is the clear, pale, greenish-blue associated with the eggs of the Wheatear, and it is spotted and streaked with brown, the markings being very Bunting-like in character.

Personally, I had no doubt as to the identity of this egg, bearing in mind the hardness of the shell when drilled, the curious pale colour of the yolk, and the weight of the empty shell (194 mg.). Mr. Jourdain saw the egg shortly after it was taken, and thought it was probably a Cuckoo's egg, although of a quite remarkable type. He advised further observation with a view to obtaining confirmatory evidence, if possible.

Accordingly, on May 17th my friend and I again visited the locality. A Hedge-Sparrow left the bush as we approached and upon inspecting the nest we were delighted to find that it contained two young Hedge-Sparrows a few days old, and one addled Hedge-Sparrow's egg. There is therefore no sound reason to doubt the identity of the first egg found. It is noteworthy that nothing appeared to have been added to the lining of the nest.

This is the earliest date for a Cuckoo's egg that has come to my notice, and I think it must be somewhere near the record for this country. It will be interesting to hear if any other readers have found early eggs this season, as I might add that I had a second egg brought to me from another locality that had been taken on May 3rd.

F. HOWARD LANCUM.

EARLY BREEDING OF CUCKOO IN DEVONSHIRE.

ON the evening of May 30th, 1924, near Budleigh Salterton, Devon, my attention was arrested by a great clamour of birds in and about a hedge surmounting a bank, and bounding a large orchard. On drawing nearer I saw crouching on the bank at the hedge bottom an unmistakable young Cuckoo (*Cuculus c. canorus*). It looked desperately frightened and opened its vivid orange-red mouth piteously.

On the road close by a pair of Pied Wagtails (*Motacilla a. yarrellii*) were pattering to and fro in a very agitated manner, and calling as if in the greatest distress. By this I supposed

the Wagtails to be the Cuckoo's foster-parents. After I had looked at the Cuckoo at close quarters for a moment or two, it fluttered from the hedge and flew to a large and very leafy apple tree, where the clamour was at once continued with renewed vigour.

To find a young Cuckoo out of the nest at a date when a large proportion of Cuckoos' eggs are yet unlaidd is surely a rather remarkable circumstance. From the comparative agility of the bird I should have imagined it to have left the nest a day or two previously, but even if the Cuckoo had flown that day it means that the egg was laid not later than April 28th.

W. WALMESLEY WHITE.

EARLY ARRIVAL OF SPOONBILLS.

FOUR Spoonbills (*Platalea l. leucorodia*) were on Cley Marshes in Norfolk from March 27th to 30th, 1924. Although this bird is now an annual visitor to Norfolk this is the earliest record I have a note of.

CLIFFORD BORRER.

WATER-FOWL AND REED-WARBLER ON A LANCASHIRE MOSS.

To the list of birds seen by Mr. H. W. Robinson on the north Lancashire moss at the head of Morecambe Bay (*British Birds*, Vol. XVIII., p. 27) may be added the Scaup-Duck (*Nyroca m. marila*); my wife and I watched a duck or immature drake on November 24th, 1923, feeding among six other species of duck. Shovelers (*Spatula clypeata*) nest there in plenty, but nests which we saw on May 6th, 1923, were washed out, and on June 10th I found a nest in a field by the side of the moss. On the latter date I saw also a Snipe's (*Capella g. gallinago*) nest with eggs and caught some young Redshanks (*Tringa t. totanus*). On May 6th there was a Reed-Warbler (*Acrocephalus s. scirpaceus*) singing in a bed of reeds; this must be near to its northern limit of distribution.

A. W. BOYD.

EIDER DUCK IN THE ISLES OF SCILLY.

ACCORDING to Clarke and Rodd's "Birds of Scilly" (*The Zoologist*, 1906, p. 304), the Eider Duck (*Somateria mollissima*) has occurred three times in Scilly, totalling six specimens, the last being three shot in Tean Sound on December 18th, 1891.

A new record is that of an immature female shot by Mr. Moore from some rocks at the north end of Tresco a few days before Christmas, 1923. He ate the bird and found it equal to a Mallard!

H. W. ROBINSON.

L 5

INCREASE OF GREAT CRESTED GREBES NESTING
IN KENT.

A PAIR of Great Crested Grebes (*Podiceps c. cristatus*) nested near Maidstone in May, 1920 (see Vol. XIV., p. 44), and brought up their young.

This year (1924) on the same water I counted twenty-three birds! One pair nested early in April and sat on three eggs near the original site of 1920. These eggs proved infertile. Now there are at least eight pairs nesting and possibly more. At this rate of increase in a few years time there will be a multitude of Grebes! The owner of the water has asked me whether a large number will be bad for the fishing.

This particular water is perhaps the best for pike, perch and roach in the south of England.

On referring to *A Practical Handbook of British Birds* (Vol. II., p. 453), under "Food," we read: "*Mainly small fish of various kinds, but also insects, especially coleoptera*"; this statement as regards fish tells us nothing; there are fish and fish.

I should be grateful if any reader can inform me what answer I can give to the owner; he is willing and pleased for the birds to be there, but there comes a limit to the number that any lake can support. The size of the lake is about thirty acres.

JAMES R. HALE.

[In reply to a request for an account of his experience Mr. C. Oldham writes as follows:—

"The text books speak of insects and mollusca as supplementary to the main diet of fish. I have never examined any stomachs of the Great Crested Grebe, but can well believe that the bird eats insects, mollusca and crustaceans to some small extent, for the Little Grebe does, as I know from the examination of several stomachs. I am confident, however, that the principal food of the Great Crested is fish. For the past forty years I have been familiar with the bird, first on the Cheshire meres, where it abounds, and later at Tring, where many pairs nest every year. I can say without exaggeration that I have seen many thousands of fish caught and eaten by adults, and further that I have never been able to detect anything but fish given to the young; although no doubt other creatures serve at times too. All the waters where I know the Great Crested Grebe well teem with coarse fish and the presence of the birds seems to make no appreciable difference to their numbers.

“As to the species of coarse fish that are eaten I cannot say much, but I think that the birds’ taste is a catholic one. It may be that the spiny dorsal fin of a perch and the spines of a pike would cause those fish to be avoided, but I doubt it. It is not easy to identify a fish struggling in the Grebe’s bill, particularly when the bird is some distance off shore, but I can speak positively to pike, roach and bream being eaten.”]

MARKED LAPWING RECOVERED IN ITS TWELFTH YEAR.

THE Aberdeen University ringing scheme came to an end during the war, some markers continuing longer than others while their stocks of rings lasted. It is therefore natural that very few birds have been recovered since the publication of the final report upon the inquiry in 1921 (*Ibis*, XI. Series, III., 466). The total is indeed only three, namely, a Mallard of which the particulars could not be established, a Mallard of which the particulars have already been recorded in these pages (XVI., p. 265), and the subject of the present note. This Lapwing (*Vanellus vanellus*), A.U. 27439 (Case 924), was marked as a nestling by Mr. A. N. Bothwell at Kintore, Aberdeenshire, Scotland, on May 21st, 1912, and was caught by Mr. J. Scott at Ballymoe, co. Galway, Ireland, in the last week of January, 1924. The ring and foot were returned to the University and have been sent to me. The ring shows little sign of wear except at the edges, although three letters of the inscription that had probably been less deeply stamped than the rest are rather faint. The foot shows no trace of abrasion.

A. LANDBOROUGH THOMSON.

RUFFS IN LANCASHIRE AND CHESHIRE.

IN *British Birds*, Vol. XVI., p. 86, I recorded the occurrence of a number of Ruffs (*Philomachus pugnax*) on the Dee Marshes in the spring of 1922.

In the spring of 1923 I saw only one—on May 12th, but as late as November 4th there were six Ruffs in company with a late Greenshank (*Tringa nebularia*) and a Little Stint (*Calidris minuta*).

During the spring of 1924 Ruffs were present in some numbers. Mr. G. A. Carver and I first saw them on April 5th, and there must have been fully fifteen on the marsh, nine of which wheeled about in a close flock for some time. On April 26th there were seven, one of which, seen at close quarters, had a dark grey head and neck and was heavily marked on the breast. We last saw them on May 4th, when

my wife and I had a beautiful view of two in summer dress—one with a chestnut-red head and neck and blackish ruff and the other with head and neck silvery-white freckled with darker markings.

On the Sewage Farm at Clifton, near Manchester, it has appeared on several occasions. On September 10th and 27th, 1923, there was one, and in the spring of 1924 I first saw one on April 16th. On April 23rd there were two, both presumably males, as they were of the same size, but one was in winter plumage, while the other had head, neck and breast, of deep chocolate-brown, mottled with white on the breast and was very much darker than the other in the feathers of the mantle. Mr. I. Whittaker also saw these two and told me that one was still there on April 26th.

This species has rarely been seen in Cheshire in full dress and evidently is now of more frequent occurrence than formerly.

A. W. BOYD.

BREEDING OF THE GREAT BLACK-BACKED GULL IN DORSET.

IN *British Birds*, Vol. XII., p. 93, appeared a note on this subject from Mr. W. J. Ashford, in which the writer comes to the conclusion that there is not sufficient evidence for including the Great Black-backed Gull (*Larus marinus*) in a list of Dorset breeding birds. It is of interest, therefore, to record that on May 25th, 1924, Mr. A. Blinn of Weymouth found a nest with two eggs, on to which he marked the parent bird, on the flat top of a large chalk boulder, some 25 feet high, below Whitenose Point, west of Lulworth Cove. Fishermen constantly take the first layings of Herring-Gulls' eggs for food in that locality, and as these would probably soon have shared the same fate, Mr. Blinn took the eggs to prove the record, and showed them to me, unblown. The measurements were approximately 80 by 53 mm.

F. L. BLATHWAYT.

GLAUCOUS GULLS IN THE ISLES OF SCILLY.

IN "The Birds of Scilly" published in *The Zoologist*, 1906, by Dr. Clarke and Mr. Rodd, only two records of the Glaucous Gull (*Larus hyperboreus*) are given, viz., Tresco, 1874, and Tresco, 1885.

A third record is that of a bird which spent a few weeks in St. Mary's Pool during the spring of 1911.

In January this year (1924) a bird in the white plumage appeared in St. Mary's Pool, followed by two others, also in the same plumage. They were identified by Mr. C. J. King,

who got a photograph of one of them. They left separately at different dates in mid-March. During their visit to the pool the Great Black-backed Gulls were no longer lords therein, as the Glaucous soon showed himself to be their master.

H. W. ROBINSON.

SONG-THRUSH IMITATING REDSHANK.—Mr. C. I. Evans writes that in the New Forest in 1919 he heard a Song-Thrush (*Turdus ph. clarkei*) incorporating into its song as a regular thing the note of Redshanks (*Tringa t. totanus*) that were breeding not far off. This year (1924) in Wales, just below the Pen-y-Gareg dam of the Birmingham Water Works, he believes that he heard a Song-Thrush introduce the rippling note of breeding Curlews, but had not time to make certain. Mr. Evans asks for confirmation of the second instance given.

LETTERS.

VELOCITY OF FLIGHT IN BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—On May 21st, 1924, I timed a pair of Yellow Buntings (*Emberiza c. citrinella*) flying in front of my car for about 150 yards. The speed registered on the speedometer was 22 miles per hour. This was at Locksley, near Stratford-on-Avon.

The following day I also timed a cock Blackbird near Wellington, his speed being, for about 50 or 60 yards, 26 miles per hour.

THOS. L. S. DOOLY.

BREEDING-HABITS OF THE RED-LEGGED PARTRIDGE.

To the Editors of BRITISH BIRDS.

SIRS,—I cannot let Mr. M. Portal's note (*antea*, Vol. XVII., p. 315) on the peculiar breeding-habits of the Chukor Partridge (*Alectoris græca cypristes*) and the Red-legged Partridge (*Alectoris r. rufa*) pass without recalling a remark of Aristotle on the same subject. His words are: "Partridges make two nests of eggs, upon one of which the male sits, on the other the female; and each of them hatches and brings up its own; . . ." (Cresswell's translation of *The History of Animals*, Book 6, Chapter 8). Unfortunately, Aristotle lumped together under the name of *Perdix* at least four species of Partridges, and it is not possible with any certainty to refer his numerous remarks on Partridges each to its proper species. Two of the four species are the Greek and the Red-legged Partridges, and very probably the citation refers to one or other, or both of these species. We now have Aristotle's statement fully confirmed for the Chukor Partridge, a pair of which Mr. Portal placed under virtually experimental conditions for observation, and rendered very probable for the Red-legged Partridge, according to the same ornithologist. The importance of the observations hardly needs to be pointed out. The device of rearing the brood in two separate lots and places is apparently unique, and may be adaptive, since it ought to favour survival of the brood. The habit may also serve incidentally to subdue the excessive *libido* of the male.

5, CHALMERS STREET, EDINBURGH, June 3rd, 1924. J. M. DEWAR.



REVIEWS

A Natural History of the Ducks. By John C. Phillips. Vol. II. The Genus *Anas*. Twenty plates in colour and six in monochrome. Thirty-eight outline maps. (London, Longmans). £10 10s. per vol.

WE welcome this second volume of Mr. Phillips's great work on the Ducks, of which we have already noticed Volume I. (Vol. XVII., pp. 44-5) and explained the general plan of the work.

This volume is entirely devoted to the genus *Anas*, in which the author includes forty-nine species, many of which, such as the Pintail, Gadwall and Wigeon, have often been separated generically, though most modern authors have taken a broader view of the genus. We notice, however, that Mr. Phillips does not include in this genus the Marbled Duck (*Anas angustirostris*).

With nine of the species on the British list this volume has more special interest to the readers of this magazine than the first volume. By far the longest account is that devoted to the Mallard. A bird so common and with such an extraordinarily wide range has naturally provided a mass of distributional records, and Mr. Phillips gives these (grouped geographically) in considerable detail, as indeed he does for all species, and this is an important feature of the work. These records must, however, be referred to with discrimination in some cases, but as the authority is always given this is made possible. For instance, the Garganey is said to have occurred in the Outer Hebrides on the authority of Harvie-Brown and Buckley, but this was a mistake for the Gadwall, as was pointed out in the *Annals of Scottish Natural History*, 1911, p. 184, and that a mistake was likely should have been detected on account of the use of the scientific name *Anas strepera*. Under the Mallard and also under the Pintail and Wigeon (or Widgeon as he spells it) Mr. Phillips gives some evidence, but it is slight and inconclusive, that females and young winter further south than adult males.

Although we have not attempted to check Mr. Phillips's references with any thoroughness, we have happened on two or three mistakes, which we think should have been avoided in a monograph of this kind. For instance, the original reference to Linnaeus's 10th edition for *Anas querquedula* should have been page 126, not page 203, and for *Anas circia* the 12th edition of 1766 and not the tenth of 1758, while the date of Part II. of Vol. I. of Gmelin should be 1789, not 1788 (see J. Hopkinson, *P.Z.S.*, 1907, p. 1,035-7), and this last mistake is repeated in many places.

The plates in this volume are much more satisfactory than in the first. There are more of them, especially in colour, and they reach a higher standard. Mr. Allan Brooks, the well-known Canadian artist and ornithologist, is responsible for twenty out of the twenty-six appearing in the volume, and we have not had the pleasure of seeing his work in any quantity before. Some of his drawings are much more pleasing than others, but we must protest against his use of lead-coloured backgrounds, often with no visible horizon line. This is intended, perhaps, to show up the birds, but it destroys all idea of a picture, and that Mr. Brooks can make his drawings more attractive pictorially is evident from the plate of the Falcated Teal. We sincerely hope that the idea of employing a screen-like background will not become prevalent in works of this character, whose size gives scope for a picture without destroying the value of the figure.

The Literature of the Charadriiformes from 1894-1924 with a classification of the order, and lists of the genera, species and subspecies. By George C. Low, M.A., M.D., M.B.O.U. (Witherby). 12s. 6d.

THOSE ornithologists who are specially interested in the "waders" must indeed be grateful to Dr. George Low for this work. Its chief aim is to give (grouped under each genus) references to all the chief papers and important notes on these birds since the issue of Volume XXIV. of the *Catalogue of the Birds in the British Museum* to the end of 1923. But beyond this, when the title of any paper is not self-explanatory, Dr. Low gives brief details of the main point as it affects his subject, so that by consulting this work much time and trouble are saved. British species, it may be remarked, are very fully dealt with. Dr. Low also treats of the classification of the group and gives some valuable tables in this connection. In genera grouping he steers a middle course, while in nomenclature he is up to date in his interpretation of the rules for priority and assists the reader by giving the name formerly used in cases where recent changes have been made.

Altogether the book will be invaluable to those who wish to know what has been written during the last thirty years on this fascinating group of birds, and ornithologists are under a considerable debt of gratitude to Dr. Low for having compiled and published such a useful work.

The Birds of the Isle of Man. By P. G. Ralfe. Edinburgh, David Douglas, 1905, with "Supplementary Notes to The Birds of the Isle of Man, July, 1923." 21s. complete. Supplement 3s.

THIS is a reissue of Mr. Ralfe's well known work on the Birds of the Isle of Man with a supplement bringing it up to date. Such supplements to county avifaunas are very useful and valuable and we are glad to draw attention to this one, which is very welcome. Mr. Ralfe has, perhaps wisely, kept to the nomenclature used in the body of the work, but we think he would have been well advised to have put under separate headings (if only to give them prominence) the Greenland race of the Wheatear and the northern race of the Great Spotted Woodpecker, which have been determined as occurring in the island. As he states, very little has yet been done to determine what subspecies occur, and it is not known if the typical forms of the Song-Thrush, Robin and Great Tit, for instance, have ever visited the island. The author states, however, that the Coal-Tit is like the British and not like the Irish bird, but the Dipper is uncertain, while the Jay is not known to occur.

Mr. Ralfe is able to add the following species to his Manx list of 1905, viz. : Blackcap, Yellow Wagtail, Tree-Pipit, Hen-Harrier, Honey-Buzzard and Pink-footed Goose, while the Lesser Whitethroat and the Carrion-Crow, previously doubtful, are now made certain, and the Woodcock, Common Tern, Common Sandpiper, Great Black-backed Gull and Short-eared Owl, formerly not known with certainty to nest, are now definitely added as breeding species.

Although most of the important additions have been published from time to time in the pages of the *Zoologist* or *British Birds*, we are grateful to Mr. Ralfe for bringing them together in this convenient form and hope this may induce more observations, especially on migration, and the subspecies occurring, as well as the status of some of the smaller birds, such as the Warblers. We may add that the supplement like the original book is generously supplied with illustrations.

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THE DISTRIBUTION OF BLACK GROUSE IN GREAT BRITAIN.

BY

HUGH S. GLADSTONE,

I HAVE often heard it said that, although Blackgame (*Lyrurus tetrrix britannicus*) have never occurred in Ireland, they have been reported from every county in England, Wales and Scotland.

To satisfy my own curiosity I have compiled the following notes which may possibly be of interest to others besides myself. I have examined all the available county lists of birds and I find that Blackgame have been recorded in every county in England and Wales with the exception of:—

Anglesey, Cambridge, Channel Isles, Essex, Hertford, Huntingdon, Isle of Wight, London and Middlesex.

It is very difficult to arrive at a conclusion as to which counties can claim the Black Grouse as being, or as having been, an indigenous species, but the following counties would appear to rank in this category:—

Brecon, Cheshire, Cornwall, Cumberland, Derby, Devon, Dorset, Durham, Glamorgan, Hampshire, Hereford, Kent, Leicester, Lincoln, Monmouth, Montgomery, Norfolk, Northumberland, Nottingham, Pembroke, Radnor, Shropshire, Somerset, Stafford, Surrey, Sussex, Warwick, Westmorland, Wiltshire, Worcester and York.

It is doubtful whether the Black Grouse was an indigenous species, or owes its presence to introduction in the counties of:—

Berkshire, Cardigan, Carmarthen, Denbigh, Flint and Merioneth.

The species apparently owes its occurrence in the following counties to its introduction therein:—

Bedford, Carnarvon, Isle of Man, Lancashire and Suffolk.

The Black Grouse has only been recorded as a rare straggler to:—

Buckingham, Gloucester, Northampton, Oxford and Rutland.

In many counties the indigenous stock has been supplemented by introductions, and the present status of the species in England and Wales may be arbitrarily summarized under

the four heads:—(1) *Extinct* or *Rare Straggler*, (2) *Nearly Extinct* or *Very Local*, (3) *Local*, (4) *Numerous locally*—as follows:—

- (1) *Extinct* or *Rare Straggler*:—Bedford, Berkshire, Buckingham, Cardigan, Carmarthen, Carnarvon, Glamorgan, Gloucester, Hampshire, Isle of Man, Kent, Leicester, Northampton, Oxford, Pembroke, Rutland, Suffolk, Surrey, Sussex, Wiltshire and Warwick.
- (2) *Nearly Extinct* or *Very Local*:—Cheshire, Cornwall, Denbigh, Dorset, Flint, Lancashire, Merioneth, Monmouth and Norfolk.
- (3) *Local*:—Brecon, Derby, Devon, Durham, Hereford, Lincoln, Montgomery, Nottingham, Radnor, Staffordshire, Shropshire, Worcester and Yorkshire.
- (4) *Numerous Locally*:—Cumberland, Northumberland, Westmorland and Somerset.

As regards Scotland, the Black Grouse has not been reported from the Shetlands. The only record of its occurrence in the Orkneys is that of a Grey-hen alleged to have been killed in 183², and an introduction to these islands in 1859 failed. The species is not a native of the Outer Hebrides and if introductions have been essayed there they would appear to have been unsuccessful. Blackgame are said to have been introduced to Caithness [*circa* 1810] and to have been first seen about 1815 in Sutherland where they are supposed to have come from Caithness. In all the remaining Scottish counties the species would appear to be indigenous and it does not seem necessary to deal categorically with the present-day distribution of the species which, in spite of possible increase in some few favoured localities, is generally acknowledged to have decreased and to be annually decreasing. It may, however, be stated that Blackgame are to-day found in no greater numbers in Great Britain than they are in the south-west, and Border counties, of Scotland.

There is no evidence that the Black Grouse was ever indigenous to Ireland. The species has repeatedly been introduced to county Antrim, and its introduction to counties Limerick, Mayo, Tyrone and Wicklow has also been essayed, but nowhere have these introductions met with success.

It may perhaps be noted that the Black Grouse has been separated into five sub-species:—*Lyrurus tetrix tetrix*: distributed over the greater part of Europe to Russia, Roumania and Bulgaria; *L. t. britannicus*: restricted to the British Isles;

L. t. viridanus : inhabiting the steppes of East Russia and West Siberia; *L. t. mongolicus* : found in Transbaikalia and Mongolia, and *L. t. ussuriensis* : ranging throughout Manchuria to the Bay of Peter the Great and the Chingan Mountains. In this connection it must be remembered that the European form has often been introduced into Great Britain (as in 1901, 1903, 1904 and 1907, when it is known that Continental birds were turned down at Woburn in Bedfordshire); similar importations from abroad have been made elsewhere and the purity of our British sub-species may therefore have been defiled.

I must thank the Duchess of Bedford, Miss L. J. Rintoul, Mr. H. E. Forrest, the Rev. F. C. R. Jourdain and Mr. H. F. Witherby for the assistance they have given me in the compilation of this article, but they must not be held responsible, either collectively or individually, for the summary which I have here given. To arrive at the present distribution of the Black Grouse in Great Britain is obviously a difficult problem for any one person to tackle and I hope that the readers of *British Birds* will criticise these notes freely in order that a correct estimation of the status of *Lyrurus tetrrix britannicus* in the British Isles may eventually be forthcoming. I shall especially appreciate information giving dates and any known cause of the bird's extinction in counties under categories (1) and (2) and if they have been re-introduced or are known to exist in any of these counties. I shall be glad to have up-to-date information regarding the bird's status both past and present in counties under category (3), while I shall also welcome notes of any marked increase or decrease in counties under category (4).

COURTING DISPLAY OF THE GOLDENEYE ON SALT WATER.

BY

HENRY BOASE.

DURING recent years, Goldeneye (*Bucephala c. clangula*) have frequented an enclosure flooded at each tide in the Tay Estuary. The mussel bed just within the retaining dyke is the favourite feeding ground, and there the Goldeneye has made frequent display. The displays have varied somewhat in detail and some of the usual forms are as here described.

On January 13th, 1917, six males were displaying to one female. The head feathers of the male were raised, making the head appear large; the head was held rather higher than in the normal attitude, and, swimming near the female, the males displayed as follows. Starting with the normal attitude, that is, with neck retracted, the neck was suddenly extended upwards, the head remaining normal to the neck, a back-throw of the head and neck so that the nape touched the tail, the neck being arched over back, followed by an up-thrust of the tail, the bird resting momentarily on the base of the neck in the water, and a resumption of the normal posture. The action of throwing back the head appeared to be accompanied by a call or grunt. The performance was carried through with a swing and with great rapidity, and an individual might repeat the display several times in rapid succession.

On February 11th, 1922, another form of this display was seen. Again, no female was near; several were feeding some distance away and presumably in sight of the males, however. The display began as before with the upward extension of the neck and the swing back so that the nape touched the tail, but, held there an instant, and instead of the up-thrust of the rear of the body, the head and neck were jerked up in line vertically, and a call "quee-reek" uttered, then a relapse to normal. After several repetitions, the male flew over to a group of one male and five females and displayed before one of the females as given. He seemed to make an impression, for, swimming away from the group he was followed by the particular female addressed, which in turn was followed by the other male. The intruding male then began a new display, bobbing the head in a curved path by rapid retractions of the neck and was imitated or

replied to by the female with a similar performance, while the second male displayed now and then in the above form. In the course of a minute or two, the ruling passion for food prevailed and feeding was resumed.

In some cases the female appears to make a display somewhat similar to that of the male. In one instance, the female made display by extending the neck with head in line at an angle of about 45 degrees, the head feathers being raised. The female also makes short runs at the male with head and neck in line extended horizontally—this is, of course, an action common to many ducks. The Goldeneye also uses what may be a form of preening pretence, where both male and female may rub the sides of the head on the plumage of the back, behaving excitedly—in one instance the male began and the female immediately copied.

In another case of the female displaying, she appeared to imitate the male more fully than described above, though she did not throw back the head and neck over the back. On an occasion when a male was displaying to two females, these swam round him with chin on the water and neck almost submerged, the body being sunk low; they appeared to be calling, but wind made the sound inaudible.

On March 11th, 1923, one pair, probably already mated, were displaying. The male suddenly raised the head feathers and with head held high, swam towards his mate. When near her, the male threw the head and neck back, the nape touching the tail, immediately recovering and jerking the head in line with the extended neck held stiffly vertical, the final motion being accompanied by a call "urr." As usual, the whole display was very rapidly executed. The female, which had been watching the male with chin on the water, and neck retracted, replied by jerking head and neck in line upwards at a steep angle, holding the final extended position for an instant, and returning to normal. These displays were repeated several times.

On several occasions, immature males have been seen making display. On April 27th, 1923, a group of four immature males—the head feathering was brown with the white spot at the base of the bill well developed—were carrying through the usual display of the male, though no female was in the neighbourhood. On April 16th, 1916, two individuals—either immature males showing no trace of the adult dress, or females, details could not be made out—displayed together similarly to the display of the female described above.

Display has also been used as a welcome to newcomers. In one case, two individuals judged to be females (of course, they may have been young males showing no trace of adult dress) showed great excitement at the approach on the wing of a male. He showed no interest, but the two "females" called "quar-quar" and held the head and extended neck stiffly upwards at a steep angle, the head feathers raised, and one bobbed the head by repeated retractions of the neck, calling. The male made no response.

These displays have been seen under widely different weather conditions. In the one instance only has the up-throw of the hind portion of the body been seen, an occasion when no female was in sight, though, owing to the haze, one or more may have been outside the range of vision.

According to published records, it appears that adult males are relatively scarce in the south of Scotland and in England. In the Tay Estuary, however, males in perfect plumage at least equal the number of females and juveniles seen, and of the juveniles, most of these show traces of male plumage.

NOTES

BROODING PRIOR TO LAYING.

SOME notes on the above subject appeared in Vol. XIV. (pp. 159, 192). The following occurrences were noted during 1924, and perhaps it is the rule, rather than the exception, for a certain amount of brooding to occur during the two or three days preceding the laying of the first egg. Thus at midday on May 4th a Skylark (*Alauda a. arvensis*) was put off its empty nest, and the following morning the nest held one egg. On April 24th and 25th I put a Mistle-Thrush (*Turdus v. viscivorus*) off its empty nest and on the 26th one egg had been laid.

Occasionally, however, the period of brooding is more prolonged. On April 22nd my brother put a Chaffinch (*Fringilla c. cælebs*) off her empty nest, and again on the 24th and 26th the bird was put off, but the first egg was not laid until the 28th. On November 21st, 1923, I noticed two Rooks (*Corvus f. frugilegus*) brooding on their nests, and these same nests held eggs the following April, but whether the eggs were the product of the above-mentioned Rooks I should not like to say.

R. H. BROWN.

INTERVAL BETWEEN THE BROODS OF DOUBLE AND TREBLE BROODED BIRDS.

BUT little seems to have been observed or recorded regarding the interval which may occur between the broods of species which produce more than the one brood in a year, and I may mention two instances which have occurred this season (1924) in a friend's garden in Yorkshire which throw a little light on the subject. The garden is quite a small one, only some twenty yards square, and I can vouch for the accuracy of my friend's observations. A pair of Hedge-Sparrows (*Prunella m. occidentalis*) hatched their first brood of five in April. When the young were about ten days old it was noticed that the hen was feeding them and at the same time was building a second nest in an adjoining bush. She made no secret of this and was clearly seen first to carry food to the brood and then to take material to the new nest. She did not succeed in completing this before the first egg of the second clutch was ready, for this was found laid on the ground, and subsequently two more of the eggs proved to be infertile, and she only raised two young ones in the second

brood. At the time of writing the bird is sitting on a third set of eggs in a third nest. The second case concerns a Blackbird (*Turdus m. merula*) which raised a brood of five in some ivy in the same small garden. On the very day that the young ones left the nest an egg, the first of the second clutch, was laid in the same nest, and five young ones were again raised in the same old nest.

Here are two cases in which there was no interval whatever between two broods, in fact in the first case they actually overlapped, and further evidence would be valuable.

A. ASTLEY.

BIRDS ON THE ISLANDS OF SCILLY.

THE following notes are supplementary to those published in Vol. XVII., pp. 55 and 91, and are the result of a visit to the islands from May 24th to June 2nd, 1924.

A solitary male Chaffinch (*Fringilla c. cælebs*) was seen on Tresco; a Warbler, one only and silent, probably Sedge, on St. Mary's; Goldcrests (*Regulus regulus*), one seen, another heard, on Tresco. Sky-Larks (*Alauda a. arvensis*) were seen and heard on St. Mary's. (In 1923 I saw one bird for two visits, and have heard from other sources that last year showed an unusual deficiency of Sky-Larks.) On May 25th a bird was reported to me by two observers on Annet, which from its size and coloration—black, white and chestnut head—suggested a Woodchat, but it did not stop.

I was again too late for Hoopoes and Orioles; both species had appeared at Tresco Gardens, sung and moved on before May 24th. On the other hand a small flush of Turtle-Doves (*Streptopelia turtur*) was evident, a single bird being seen on May 27th on Annet—a most unsuitable locality—where it was being pursued by a Rock-Pipit, possibly being mistaken for a Cuckoo. Later, on St. Agnes, a small flock was seen. As neither Annet nor St. Agnes are likely breeding sites, the former having not one bush, it seems that the Scilly Islands are in the line of Turtle-Dove migration.

One Great Northern Diver (*Colymbus immer*) in almost perfect breeding plumage was seen on May 25th. Three Glaucous Gulls (*Larus hyperboreus*) which have wintered at the Scillies were seen on Tresco Pool on June 1st.* Common Terns (*Sterna hirundo*) had eggs; possibly fifty nests at one station. Turnstone (*Arenaria interpres*) in various plumages were still present on June 1st. A Heron (*Ardea cinerea*) on outlying rocks. Gannets seen daily both in adult and dark plumage.

* See *antea* pp. 61-2.—EDS.

The destruction of Shearwaters (*Puffinus p. puffinus*) and Puffins (*Fratercula a. grabæ*) by Greater Black-backed Gulls goes on, and I counted about forty corpses within forty feet linear. Sporadic and desultory efforts are being made to reduce the breeding stock of *L. marinus*, but the species is now well established and very numerous, breeding on uninhabited islands and outlying rocks, and drastic measures will be needed to reduce its numbers to reasonable proportion. On June 2nd a continuous movement of Shearwaters was going from N.W. to S.E. off Land's End, about 150 to 200 birds being counted. So far as I know, no breeding haunt of this species is recognized on the western Cornish coast.

H. M. WALLIS.

LARGE CLUTCH OF LINNET'S EGGS.

ON June 25th, 1924, I examined the nest of a Linnet (*Carduelis c. cannabina*) built in an apple-tree in my garden at Maidstone, and found it to contain seven eggs, all of the same type.

W. WOOD.

[The seven clutch is scarce in this species, but I have notes of several other instances, from Surrey (R. H. Read), Somerset (S. Lewis), Staffordshire (P. C. Dutton), Sussex (C. Smeed), etc.—F.C.R.J.]

CHAFFINCH LAYING ON THE GROUND.

ON June 5th (1924) as I was crossing a piece of meadowland at Wisley, Surrey, I put up a Chaffinch (*Fringilla c. cælebs*) from four eggs lying together on the bare earth. They were typical Chaffinch eggs and quite warm; so she was evidently sitting. There was no attempt at a nest. They were amongst five or six sprouts of young bracken one foot high, but this afforded them no cover from sight, or shelter from rain. The meadow is surrounded by trees and hedges and it has also a good many clumps of gorse all quite suitable for a Chaffinch's nest.

L. E. TAYLOR.

LARGE CLUTCH OF YELLOW BUNTING'S EGGS.

ON June 4th, 1924, I found near Eton, Bucks, the nest of a Yellow Bunting (*Emberiza c. citrinella*) in which was a clutch of nine eggs. Though probably the result of two hens laying in the same nest the eggs were similar in markings, except that six of them seemed to have a rather darker background. The hen was sitting on the eggs when the nest was found.

A. MAYALL.

WOOD-LARKS BREEDING IN SHROPSHIRE AND WORCESTERSHIRE.

THE present status of the Wood-Lark (*Lullula a. arborea*), a species that is evidently increasing in numbers and undergoing considerable modification in its distribution, will be of interest in years hence. I am not aware of this bird having been recorded as found existing until the last few years in either Shropshire or Worcestershire, and only a very few more or less indefinite instances of its occurrence seem to have been given.

It is, I think, to the indefatigable investigations of Mr. E. Chance that we owe the earliest finding of the nest and eggs in Shropshire and that in 1921, since when several additional pairs have been found by him nesting in the same area.

Working over a less restricted tract of country during the present year (1924) I have been able to locate some twenty pairs within a six-mile circle, and I doubt if this number could not have been further increased.

Mr. C. Oldham and I found this species commonly within the Worcestershire area where similar conditions of country prevailed as in Shropshire, and in two instances we found them with young. Various instances of their occurrence in the latter county apart from this area referred to are also to hand, the most recent and distant being on June 23rd, when I heard one in good song on the Cotswolds above Broadway, just where the county adjoins Gloucestershire. J. S. ELLIOTT.

GREY WAGTAIL NESTING IN A TREE.

ON June 22nd, 1924, I found the nest of a Grey Wagtail (*Motacilla c. cinerea*), containing six fledged young, in an elm tree beside the river Caldew, Cumberland. The nest was placed in a fork of the tree, against the stem, and was approximately twenty feet from the ground. R. H. BROWN.

PIED FLYCATCHER IN WORCESTERSHIRE AND SHROPSHIRE.

IN 1921 (Vol. XV., p. 43) the Pied Flycatcher (*Muscicapa h. hypoleuca*) was first recorded as nesting in Worcestershire. On May 17th, 1924, Mr. C. Oldham and I located a male in full song in a wooded valley dividing the two counties, some four miles distant from the other nesting site. A further visit with Mr. H. E. Forrest a week afterwards satisfied us that the pair were nesting there and so they were left without further molestation. J. S. ELLIOTT.

UNUSUAL POSITION FOR WILLOW-WARBLER'S NEST.

A PAIR of Willow-Warblers (*Phylloscopus t. trochilus*) built a nest this year (1924) at a height of 11 ft. 6 in. from the ground

in jasmine growing up a house at Beckfoot, Raughton Head, Cumberland. The young left the nest on July 8th.

E. U. SAVAGE.

[This is an unusual but not unprecedented case. A nest 12 ft. from the ground is recorded in the *Zool.*, 1899, p. 556; 13½ ft. (*Brit. B.*, XI., p. 90); 15 ft. (*Zool.*, 1868, p. 1294) and 16 ft. (*Zool.*, 1872, p. 3228). Details of these and other instances will be found, *Brit. B.*, XI., p. 91.—F.C.R.J.]

BLACK REDSTART NESTING IN SOUTH ENGLAND.

THE Black Redstart, *Phœnicurus ochrurus gibraltariensis*, is described in the *Check List* as a "scarce passage-migrant and winter visitor," and in the *Practical Handbook* is the remark that "reports of breeding (in Britain) are not substantiated." After looking up the references cited by Harting in his *Handbook of British Birds* I am satisfied that this verdict is just, for in every case but one the identification seems to have been from white eggs, and not from birds. Mr. Miller Christy has dealt with the Essex report, where "a dark-coloured bird with a red tail" was seen near a nest in an ivy-covered trunk; he believes that the bird was a Common Redstart, nesting in the vicinity, but the nest and eggs, which he has seen, are those of a Redbreast. One instance, from the Isle of Wight, perhaps the most likely locality, I have not traced, for it is mentioned on the authority of Bond but without reference. White eggs discovered in nests in hedge-cuttings or similar unlikely spots may be dismissed at once.

Whether or not the Black Redstart has nested in earlier years in Britain we cannot tell, but it certainly did so in 1923 and 1924. Unfortunately I dare not give the locality, except that the nest was in a cliff face on the South Coast, where a number regularly winter. For the same reason the discoverer desires that his name shall not be mentioned, as he has no wish that through him the pair, if they nest again, should be molested. The credit for the discovery is, however, his entirely.

In August, 1923, I received a letter informing me that the writer had in the previous autumn watched a pair of Black Redstarts on the cliffs, and in May of that year a pair again appeared at the same place. They were interested in one particular spot, but my friend could not locate a nest. He was unable to visit the locality again until the end of June, when he discovered that the old birds were accompanied by four or five young birds, and on one occasion saw the male

bird feed one. I was satisfied that there was no error in identification, but decided to say nothing until I had seen the birds, and asked permission to visit the spot if the pair returned this year. Not only did they return—they were not noticed in that locality during the winter—but my friend discovered the nest and watched the old birds visiting it with food. Owing to its situation he could not see into the nest, but could hear the young ones cheeping.

On June 14th, 1924, through my friend's kindness, I visited the spot and saw the nesting hole at the top of a crack in a steep cliff. I should judge that it was between fifty and sixty feet above us in a practically inaccessible position. Both the old birds were moving about the cliff face, very anxious, and we found that the young had left the nest and were able to fly for a short distance. We discovered the male by hearing his ticking alarm note, and whilst we were watching him he called a short wheezy chitter, which may have been an attempt at song. As he perched on a buttress his dark head and black throat and breast were very distinct, contrasted with the white wing-patch. He had a sprinkling of grey or white at the base of the bill.

The young birds, three at least, were flitting amongst the fallen rocks that littered the beach, and they frequently perched on rocks and stones within a few yards of us. As they faced us their throats and breasts appeared to be soft mouse-grey, a little darker than in the female, but their upper parts, seen less distinctly, looked browner. The chestnut on the tail and rump was very distinct, but the tails shorter than in the mature birds. The bills of the young were remarkably pale—indeed as they faced us they looked almost white. The old birds, in striking contrast to the behaviour of those I have seen in winter, were nervous and restless; they dropped to the young occasionally, but we did not see them give any food.

T. A. COWARD.

[Records of supposed breeding in Great Britain are dealt with in an article by me in the *Zoologist*, 1916, pp. 417-421.—F.C.R.J.]

NIGHTINGALE BREEDING IN N.W. SOMERSET.

It may be of interest to record the breeding of the Nightingale (*Luscinia m. megarhyncha*) in a wood near Minehead in 1924. The nest contained young and both parents were busily engaged in feeding on June 9th, and I am therefore inclined to think the wood held more than one pair of these birds, as

the characteristic notes were heard in quite another part on the same morning. M. M. SELMAN.

[This is an old locality (*cf.*, Vol. V., p. 9), but it is of interest to know that the bird is still breeding at this point on the western edge of its range.—N.F.T.]

SAND-MARTINS AND BLACKCAPS ON LUNDY.

As more information on the occurrence of the above species on Lundy is probably desirable than that already given by Capt. L. R. W. Loyd (Vol. XVI., pp. 151-152), I can state that during a recent visit, June 6th to 14th, 1924, whenever I was on the north end I saw Sand-Martins (*Riparia r. riparia*) flying around the boulders above the "Constable" rock. It is difficult to state the exact number, for one might see the same birds again and again, but there were quite five or six and they appeared to me to be breeding. On the evening of the 13th one bird alighted on the rounded edge of a segment of granite and entered the crevice between the boulders. I tried to get up to it but could not. If breeding, the bird appeared to me to be visiting its sitting mate rather than feeding young.

After landing on the island on June 6th the first bird that drew my attention was a Blackcap (*Sylvia a. atricapilla*) which was singing on the slope near the fishermen's cottage, S.E. After that I heard the song often, and once from two different birds, but in the same neighbourhood, between the beach and the villa. I did not look for a nest but the thick bramble growth in places seemed very likely.

STANLEY LEWIS.

EARLY LAYING OF CUCKOO.

MR. F. HOWARD LANCUM's record (*antea*, p. 56) of an egg of the Cuckoo on April 26th, 1924, and that of Mr. Walmesley White who found a young bird on May 30th (*antea*, p. 57), are both remarkably early dates and it may be of some interest to review other cases of a similar kind.

Mr. J. O. Harper (*Zool.*, 1851, p. 3115) states that a boy found the nest of a Hedge-Sparrow with a Cuckoo's egg on April 5th, 1851, at Lakenham, Norfolk. On April 16th, 1898, a fresh Cuckoo's egg was brought in by a boy to Mr. C. Ashdown of Shrewsbury, but the Cuckoo's note was not heard in the district until the 24th (*Caradoc and Sev. Valley F.C. Report* for 1898, p. 18). The evidence in both cases is somewhat defective, and there is always the possibility of a mistake in identification.

On April 28th, 1894, Mr. H. S. B. Goldsmith states that his son took a Cuckoo's egg from a nest of the Robin in Somerset (*Zool.*, 1894, p. 224). This was in a year when the arrival of the Cuckoo in March and early April was reported from at least two localities in England. The late Mr. A. W. Johnson found a Cuckoo's egg in a Hedge-Sparrow's nest on April 29th, 1912, in Berkshire (*Brit. Birds*, VI., p. 18), and other cases have been reported on April 30th from Surrey (F. C. Selous) and Cheshire (F. S. Graves). Even during the first week of May records of eggs are not numerous and it was surprising to find that in the cold and backward spring of 1924, besides the two extraordinary records quoted above, no fewer than three hen Cuckoos were laying within a radius of a few miles in one locality in north-west Berkshire by May 8th, and in two cases the eggs had been incubated for two or three days.

F. C. R. JOURDAIN.

EARLY BREEDING OF CUCKOO IN KIRKCUDBRIGHTSHIRE.

WITH reference to the notes on the early breeding of the Cuckoo (*Cuculus c. canorus*) in the last number (pp. 56 to 59) the following may be of interest:—

At Bridge of Dee, Kirkcudbrightshire, on May 16th, 1917, I found a nest of a Hedge-Sparrow (*Prunella m. occidentalis*) containing a young Cuckoo, and on May 11th, 1918, in the same hedge, and not far from the nest I found in the previous year, I found another Hedge-Sparrow's nest containing a young Cuckoo. Both these young birds were well covered with feathers, and had evidently been hatched for several days. As the period of incubation is about thirteen days, and taking into consideration the size of the young birds found, the eggs must have been laid at an early date.

STANLEY PERSHOUSE.

EARLY BREEDING OF CUCKOO IN DORSETSHIRE.

WITH reference to the notes on the early breeding of the Cuckoo already published (*antea*, pages 56-59) it may be of interest to note that I found, near Sherborne, a young Cuckoo in the nest of a Hedge-Sparrow, on May 14th, 1924. The bird was well-feathered and, therefore, must have been hatched some days, and taking the incubation period at twelve days at least, the egg must have been laid on April 26th, or thereabouts.

C. PALMER.

ON THE SIZE OF A YOUNG CUCKOO.

THIS year (1924) I knew of an egg of a Cuckoo (*Cuculus c. canorus*) in a Pied Wagtail's (*Motacilla a. yarrellii*) nest.

Three of the Wagtails hatched out on June 4th, and the Cuckoo and the other Wagtail on June 5th. Two of the Wagtails were turned out on the night of June 6th, and one on the morning of June 7th, the Cuckoo having tumbled out with it, owing to the nest being damaged, had to be replaced. As the Cuckoo was considerably smaller than the remaining Wagtail I weighed them. The Cuckoo weighed 96 grains, the Wagtail 186.

The next morning they were both outside the nest dead. The Cuckoo then weighed 108 grains, the Wagtail 190, so that the Cuckoo had gained 12 grains in about eighteen hours, whereas the Wagtail only 4. This is not surprising, because when the Cuckoo was handled it always held up its head with its mouth wide open, whereas the Wagtails very seldom opened their mouths.

NORMAN H. JOY.

LITTLE OWL IN LANCASHIRE.

REFERRING to Mr. Robinson's notes on occurrences of the Little Owl (*Athene n. vidalii*) in Lancashire (*antea*, p. 23); I may add that I observed this bird in and around my garden at Prestwich (about four miles from the centre of Manchester) from August 29th to September 2nd, 1923. There were two birds and they were continually calling to each other during the night and early morning. I may say that I am familiar with this bird in North Africa, where they are both very plentiful and tame, and I have also heard it on occasions in Northamptonshire, but this is my first and only record of its appearance in this district, where my observations cover a period of twenty-seven years.

G. TOWNSEND.

TAWNY OWL HATCHING FOWL'S EGGS.

LAST year (1923) the grieve of a farm near Kingoldrum, Forfarshire, suspected that one of his hens was "laying away." During his search in the stackyard he found a Tawny Owl (*Strix a. sylvatica*) sitting on eggs in the middle of a corn stack, which had been built on raised iron standards. As he had discovered an Owl's nest in a somewhat similar position the previous year, he reported the matter to me on May 16th. I found that the nest was situated about ten feet from the ground almost in the centre of the stack, at the end of a horizontal passage, which had been left for ventilation. With the aid of a ladder I could clearly see the brooding bird, and it made no attempt to leave during my inspection. On my next visit to the farm, the grieve told me that on June 1st he had found a live newly-hatched chicken on the

ground beside the stack; on the day after there was a second one, dead. The following day he removed a third, which was running about at the entrance of the nesting passage. When I went to the stack (June 4th) there was a fourth lying dead where the second had been found. The Owl was sitting on the nest and I could hear a faint sound of cheeping. Two hours later, the cheeping was much louder, and on looking in I saw the Owl sitting with closed eyes, a chicken perched on its back. Carefully inserting my walking-stick I attempted to draw the chicken out with the crook, but, when it was almost within my grasp, it escaped and ran back to its foster-parent, which moved her wing to allow it to obtain cover, and after a gentle shuffle continued to brood. I then worked the crook under the Owl's wing and in this way succeeded in capturing the chick. The Owl continued to sit for several days without any further success. On examination an Owl's and a hen's egg were found in the nest, both infertile. It is probable that the hen which laid away gained access to the nesting-hole by fluttering from a pole propped against the stack. The three chicks which were rescued alive were placed under a hen and reared successfully.

T. LESLIE SMITH.

HOBBY IN SHROPSHIRE AND WORCESTERSHIRE.

IN Vol. XIII., p. 84, the Hobby (*Falco subbuteo*) is recorded as visiting the Dowles Valley on June 4th, 1919, and remaining some time in the vicinity of my house. At midday on June 16th, of the present year (1924), I saw one and watched its delightful wanderings over the same area but for a much shorter time, but it leads one to think it must have been the same bird following the same line of passage as five years ago.

The only other local record I have of the species since the earlier date was one seen whilst I was in company with Mr. R. Chase on June 23rd, 1923, passing rapidly over the town of Bewdley in a south-westerly direction. J. S. ELLIOTT.

GADWALLS AND POCHARD IN N. WALES IN JUNE.

DURING a holiday spent in the Lleyn Peninsula this year (1924), I was fortunate enough to see a pair of Gadwalls (*Anas strepera*) on a marsh near the sea coast. I first saw them on June 9th, when the two birds were seen together. Subsequently I saw one only—on June 15th and 17th.

There is no doubt in my own mind that they were nesting, though I was unable to find the nest itself.

The bird I saw most frequently was, I think, the drake in partial "eclipse," the under tail-coverts not being distinctly black. The bird could, however, fly well, and once when it passed directly overhead I heard the whistle of its wings. The white patch in the speculum showed a little in both birds when swimming, but most distinctly when the bird flapped its wings, and, of course, when in flight. I watched one bird feeding for some time, but never saw it "up-end." It swam with head stretched forward, neck almost awash, and was taking some kind of food from the surface of the water.

This, I believe, is the first record of the species in Carnarvon in summer.

There was a Common Pochard (*Nyroca f. ferina*) drake on the same water. As far as I could see he was in winter plumage. I suspect that he too had a mate sitting, though I never saw anything of her. He was at the same spot (just beside a reed bed) on June 9th, 12th and 17th.

R. M. GARNETT.

EARLY NEST OF TUFTED DUCK IN AYRSHIRE.

As all authorities seem agreed that June is the usual month for the Tufted Duck (*Nyroca fuligula*) to lay, it may be well to report that a nest of five eggs of this species was found on a loch 800 feet above sea level in Ayrshire on May 17th, 1924. The nest was deserted and I identified the eggs by the down in June. As a rule no eggs are laid here before June.

E. RICHMOND PATON.

[As stated in the *Practical Handbook*, p. 324, the last fortnight of May is the usual laying time in England and the end of May and early June in Scotland.—F.C.R.J.]

NESTING SEASON OF THE DUNLIN.

As the nesting period for the Dunlin (*Calidris alpina*) is given in the *Practical Handbook* as the second or third week in May according to *altitude*, I submit a few dates for this district, at an elevation of 700–800 feet.

Mr. John Robertson found and recorded eggs upon the 30th April in one year, and although I used to look for eggs in June I now find that the first or second week in May is the usual date. On June 4th, 1922, eggs were just hatched, while this year (1924) a nest under observation hatched upon the 1st of that month. In 1922 I have a note "Dunlin hatched and run. 2.6.22." These records refer to either Ayrshire or Renfrewshire at high altitudes.

E. RICHMOND PATON.

LARGE BROOD OF DUNLINS.

ON June 12th, 1924, I was on one of the Solway Marshes looking for young birds to ring, and during my search I put a Dunlin (*Calidris a. schinzii*) off a brood of six nestlings, all the same size, and two or three days old. R. H. BROWN.

[Mr. S. Boorman found a nest of six eggs in the Orkneys in 1905, which have the appearance of being a clutch.—F.C.R.J.]

DEMOISELLE CRANE IN NORFOLK.

AT 10 a.m. on June 17th, 1924, when staying at Blakeney, I was not a little surprised to see a Crane fly in from due north, i.e., the direction of the sea, and alight upon a grazing marsh. Needless to say, I immediately stalked it, and upon getting within range with a pair of field-glasses discovered that it was a Demoiselle Crane (*Anthropoides virgo*). It appeared to be tired, and immediately upon alighting commenced to dress its plumage, frequently rubbing its head and neck against its back and shoulders, but upon my attempting to approach nearer than the distance of some 200 yards from which I was observing it, it immediately took wing, but settled again at the further end of the same marsh. Here I had it under observation at varying ranges up to 200 yards for the greater part of the day, during most of which time it was walking briskly about feeding, and through my glasses I could see it picking off and swallowing the yellow flowers of buttercups.

It was still on the same marsh on the morning of June 18th, after which I left the neighbourhood for a week, but a good observer whom I informed of its presence failed to find it there in the afternoon, and it has not been seen since. I have since learnt, however, that a shepherd, during the previous few weeks, had reported seeing from time to time upon the same marsh a bird, which from his description it was thought locally might be a Crane. But as it was never seen by any of the local keepers or gunners, or by anybody with any knowledge of birds, it is, I think, impossible to say whether this was the same bird, or whether it was a Crane at all.

The Demoiselle Crane is so often kept in confinement that there is a strong likelihood of the bird I saw being an "escape." At the same time I should imagine that few, if any, imported birds are kept full winged, more especially as I learn that their market price since the war is £16 the pair.

That both wings of the bird I watched were quite perfect I have no doubt, as I had two excellent views of it flying, and this fact, as well as its shyness, are to my mind, at least suggestive of its being a genuine wild one.

Should this note catch the eye of anyone who knows of the recent escape of a Demoiselle Crane, it is much to be hoped that they will report the fact and thus clear up the mystery of this bird's appearance upon the north Norfolk Coast.

B. B. RIVIERE.

THE INTRODUCTION OF THE RING-NECKED PHEASANT TO GREAT BRITAIN.

IN connection with what I have already written on this subject,* it is interesting to note that Mr. H. F. Witherby has drawn my attention to the fact that Thomas Pennant made the following note in 1768:—

“Mr. *Brooks*, the bird-merchant in *Holborn*, shewed us a variety of the common pheasant, which he thought came from *China*; the male of which had a white ring round its neck; the other colors resembled those of the common species, but were more brilliant.”†

So far as I know this is the earliest record of the Ring-necked Pheasant in England.

HUGH S. GLADSTONE.

REVIEWS.

The Bird as a Diver. By J. M. Dewar, M.D. pp. xii-174. (Witherby). 10s. 6d. net.

DR. DEWAR is to be congratulated on having broken away from the ordinary run of bird books and on following up an almost unworked line of investigation. In many ways this is the most original book of the kind which it has been our privilege to read for a long time past. Previous work on the subject has been so lacking in system and fragmentary, that the collected observations in the present work form almost the whole of the available material for study. Dr. Dewar's records are, however, all taken from the Forth area and in consequence were restricted to twenty-three species, nine of which were Anatidæ; two species of Phalacrocoracidæ; four Grebes (Podicipidæ); three Divers (Colymbidæ); four Auks (Alcidæ), and the Coot. It can hardly be maintained that a work like the present, which deals solely with a selection of Palæarctic species and necessarily omits all reference to the Penguins (Spheniscidæ) really justifies the use of the title used, and we think that its conciseness is its only claim to adoption.

Apart from this, the book is a valuable piece of pioneer work in a new field. Only those who have attempted to time the submarine activities of an expert diving bird can estimate the difficulties of the task. The mere timing of dives, apart from all knowledge of the depth of water, is of little value, and there seems little doubt that the only observations of real importance are those made in areas where an accurate bathymetrical survey has been made. Even in these cases after all precautions have been taken a certain margin of error must be allowed for, as the exact position of a bird when diving cannot be

**Brit. Birds Mag.*, Vol. XVII., pp. 36-37.

†Thomas Pennant, *British Zoology*, Vol. II., 1768; Appendix, p. 501.

located with perfect accuracy as a rule on the chart, and there are also other factors which tend to obscure the results. The wonderful series of records made under known conditions in the areas which Dr. Dewar has worked, has brought to light certain definite rules, and among the most important of these is the definite correlation between the average period of the dive and the depth of water in which the bird is feeding. By means of this time-depth relation it is possible to ascertain approximately the average depth in which a bird is working from observation of a series of diving periods.

The enormously long periods of submersion recorded by the older writers (of which many instances are quoted) derive no confirmation from systematically conducted observations, and are probably due either to faulty watching, the bird appearing on the surface and submerging again unnoticed, or else from loose estimates of time, unchecked by the stop-watch.

Each of the selected species is separately treated, with tables of observations, so that the worker in this field can now see at a glance where further investigation is needed. It is interesting to note that on a basis of three criteria, the palm of diving ability is awarded to the Alcidae, the Colymbidae coming second, and the Phalacrocoracidae third.

There is no doubt that diving birds eat their food under water as a rule and Dr. Dewar states that he has recorded considerably more than 100 dives from the Guillemot and Razorbill without having witnessed, *in winter*, a single instance of either of these birds bringing food to the surface of the water.

A useful list of references to the diving habit in ornithological literature is given on pp. 167-169.

F. C. R. JOURDAIN.

Ducks of Tring Reservoirs. Wading Birds of the Tring Reservoirs. Birds observed in Hertfordshire in 1921. By Charles Oldham. Reprinted from the *Transactions of the Herts. Natural History Society*, Vol. XVII., part 4, 1923, pp. 302-321, 341-352 and 353-362.

THESE are three interesting papers by Mr. Oldham and, as we should expect from him, full of good field observations. The one on the Ducks is especially valuable and consists of observations on no less than nineteen different species. The paper on the Waders contains interesting notes on twenty-six species, while that on birds observed in 1921 deals with various interesting birds observed, and amongst these the doings of the Black-necked Grebes are of special importance. For some reason the colony does not flourish, as very few young seem to be reared. Five old birds arrived in 1921, but only two young were seen, one pair apparently failing to bring off a brood at all.

Report of the Oxford Ornithological Society on the Birds of Oxfordshire, Berkshire and Buckinghamshire, 1915-1922. Edited by the Rev. F. C. R. Jourdain and B. W. Tucker. Oxford: J. Vincent, 1924. 3s.

WE congratulate the members of the Oxford Ornithological Society on their enterprise and energy in bringing out this useful piece of scientific work, and we hope that the Editors' expectation of making a similar report annually in future will be fulfilled.

This Report is arranged under years as the largest group, counties second, and each species with a heading under the county, but it would

have been much more convenient for reference had it been arranged primarily under counties and species with the years made of third importance. As it is, if one wishes to know what has been recorded since 1915 of the Little Owl in Oxfordshire, for instance, one has to look in no less than eight different places! With this exception the Report has been very well and carefully drawn up. An important part of the work is formed by contributions by Mr. O. V. Aplin on the birds of Oxfordshire since 1915. Under Buckinghamshire the Report goes back to 1920, and thus brings up to date Messrs. Hartert and Jourdain's *Birds of Buckinghamshire and the Tring Reservoirs*. Attention may be drawn to the details given of the breeding status of the Tufted Duck, Redshank and Snipe, especially the last two, which have greatly increased as breeding birds in the area. To a less extent the Lesser Redpoll is also increasing, while we are glad to note that the Hobby figures as nesting on a good many occasions. A report received from a friend of Mr. Aplin that a pair of Pied Flycatchers bred at Horley (Oxon) in 1919 is of interest. The work also includes numerous notes of minor importance, which are nevertheless interesting as they often show irregularities in the local distribution of quite common birds.

The Birds of Portugal. By William C. Tait. pp. xii.-260. Map and 10 plates. (Witherby.) 18s. net.

It is with great pleasure that we welcome Mr. Tait's long looked-for work on Portuguese birds, for the author's long residence in the country has given him advantages which do not fall to the lot of the ornithologist who pays only passing visits to the country, and apparently we must expect little from Portuguese sources for some time to come.

There is an excellent map, which is coloured so as to show the physical features of the country, and the illustrations give a good idea of the characteristics of the local scenery. A remarkable feature of the work is the List of Ringed Birds recovered in Portugal (pp. 233-244), due almost entirely to Mr. Tait's energy in publishing information in local papers and investigating reports which otherwise would have been lost. Many of these are of the deepest interest, such as the proof that the British Song-Thrush, and British Lesser Black-backed Gull migrate to Portugal. The nomenclature is in accordance with the International Rules, and is not disfigured by the retention of obsolete and discarded names. In most cases the subspecific race is defined and we understand that the author had Mr. Witherby's assistance in the determination of skins where any doubt existed. Several of these cases give rather surprising results. Ravens from Central Portugal are like the typical race, and not, as one might expect, the Spanish form. We should like to see specimens from Algarve compared with the Abrantes birds. There are also some remarkable facts with regard to the Skylark, of which no fewer than three distinct races are found in Portugal. Two of these forms are resident, while the third is a winter migrant. The Marsh-Harrier (p. 146) is listed as "*C. æuginosus æuginosus*," but there is little doubt that the South Spanish birds belong to the smaller race originally described by Graf Zedlitz from Algeria (not Marocco as stated), and in this case there is no evidence that skins have been compared. In the case of the Goshawk and Sparrow Hawk we find both species treated binomially.

There is, however, one point on which we feel that a protest should be made. In an Appendix (pp. 231-232) the author gives a "List of some of the Ornithological Publications consulted." Probably every writer finds it necessary to consult many works which have no direct

bearing on the subject in hand from time to time, but why take up valuable space by recapitulating the titles of such works as those of Sophus Aars, Swainson, Harting, etc.? What is needed is a complete bibliography of Portuguese ornithology, and this, we regret to say, is lacking. The number of books, papers and notes directly bearing on the subject is quite small, and could be compressed into two or three pages, but it is a necessity for a faunal work, and the lack of such a list is a blemish which we hope the author will remedy at the first opportunity. Perhaps the most notable omission is Dr. E. Rey's paper, *Zur Ornithologie von Portugal* (*J.f.O.*, 1872, pp. 140-155). There is a reference to this paper on p. 23 which proves that Mr. Tait was not ignorant of the existence of this article, though he had evidently not read it, for Dr. Rey states distinctly that he met with *Corvus monedula* only in one valley, which runs in a westerly direction from Villa do Bispo to the Atlantic, and not in the buildings of the village itself. A study of this article would also have enabled Mr. Tait to add to his list the Alpine Chough (of which one specimen was shot by Rey); the Sea-Eagle (an adult seen); La Marmora's Warbler (reported as breeding) and perhaps also *Emberiza striolata* (*sahari*?). The occurrence of the last species rests on a "sight-record" only, but is not more remarkable than that of *Chersophilus duponti*. Other papers omitted from the list are those by G. F. Mathews (1864), A. C. Smith (*Ibis*, 1868), Barboza du Bocage, Reyes y Prosper, and the first edition of Paulino d'Oliveira's List. There are also brief notes on the Berlengas by H. W. Feilden and J. J. Dalgleish (with a reference to a Portuguese paper on the same subject) in the *Zoologist* for 1884 and 1885 and a short article on 'Birds in Lisbon' by H. Russell in the same periodical for 1901. We believe that the work on Spanish Birds of Prey by the Duque de Medinaceli was published in 1921.

Most of the information in this work as to the various species is from personal observation and can be relied on as far as it goes. We think that the assertion that the Azure-winged Magpie usually lays four eggs is an understatement, for Dr. Rey, who examined more than eighty clutches in Portugal, found the usual number five or six and occasionally seven, but six eggs were commoner than five. This agrees with our own observations in Spain, except that on one occasion a clutch of eight eggs was found.

Pioneer work in ornithology is always a difficult task, and in a country as large as Portugal it is impossible for one student to work out every detail of a task of such magnitude, but Mr. Tait has provided a good foundation for future workers and all ornithologists will feel grateful to him for putting within our reach the results of a lifetime of observation and study.

F. C. R. JOURDAIN.

LETTERS.

THE NORMAL CLUTCH OF SANDWICH TERNS' EGGS.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to my remarks in *British Birds* (Vol. XVII., pp. 189, 249) about what I believe to be the extreme rarity of a genuine clutch of three eggs of the Sandwich Tern (*Sterna s. sandvicensis*) in this country, I may say that out of over 400 nests in one Norfolk colony this season (1924) there was again no single clutch of three eggs and only 185 "twos."

CLIFFORD D. BORRER.

3th July, 1924.

A PRACTICAL METHOD OF RECORDING BIRD-CALLS.

To the Editors of BRITISH BIRDS.

SIRS,—The application of Professor Rowan's method described in his article in the June 1924 issue should prove of considerable value in the identification of birds by their notes, but with a view to attaining the highest degree of accuracy it is essential that the phonetic renderings should be as correct as possible. For instance, the ordinary call of the Cuckoo, which is taken to illustrate the article above referred to, sounds to me, and to friends of mine interested in birds, like "whook-oo" rather than "cuck-oo." Whilst, of course, the Cuckoo's note is well-known, the addition of alternative phonetic renderings would, in certain cases, seem desirable where this method is employed in any published work.

May I suggest that a useful purpose would be served if a committee of ornithologists were formed to undertake the compilation of a work giving the song and call-notes of British birds, based as far as possible on Professor Rowan's method. If readers of *British Birds*, all, or practically all, of whom must be keen ornithologists, were to submit to such a committee lists of bird-call records, careful consideration of them should produce almost accurate results. SYDNEY G. POOCK.
"COVERACK," CECIL ROAD, ENFIELD, 9th July, 1924.

SONG-THRUSH AND OTHER BIRDS IMITATING WADERS.

To the Editors of BRITISH BIRDS.

SIRS,—I have read with interest Mr. C. I. Evans' note on Song-Thrush utilising in its song the notes of Curlew and Redshank.

I have noticed similar occurrences myself, and it would be interesting to hear the experiences of other readers of *British Birds*.

In the Outer Hebrides, where the chief song bird is the Skylark, one finds nearly all of them imitating the Dunlin's alarm note and incorporating it into their song. This year I have heard a Song-Thrush and, more remarkable still, a Chaffinch, mimicking the mating song of the Greenshank. AUDREY GORDON.

ACHANTOUL, AVIEMORE, INVERNESS-SHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—In answer to Mr. C. I. Evan's question (*antea*, p. 62), I am almost certain of having heard myself, either in Scotland or Ireland, the notes of both Curlew and Redshank incorporated into the songs of the Song-Thrush, but hesitate to say so definitely as memory becomes a fickle thing after the lapse of years.

To aid in substantiating his belief, however, I can give the following two definite instances, within my recent experience, of the Song-Thrush reproducing notes of birds other than those of the Curlew and Redshank, *e.g.*, (1) At Malahide, co. Dublin, in 1922, a Song-Thrush breeding in the grounds of the rectory, regularly incorporated into its song the notes of the breeding Terns which it could easily hear from where it was nesting. (2) In Hertfordshire this spring a Song-Thrush gave an excellent representation of notes of the Nightingale in a spot where the latter was common.

Songs, notes, and calls of birds that are uttered at night, when otherwise comparative silence reigns, seem to be those which most readily impress themselves on the memory cells of diurnal song birds gifted with the capacity for reproducing such impressions.

H. A. F. MAGRATH.

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A NOTE ON THE NESTING OF THE RED-
CRESTED POCHARD IN THE CAMARGUE.

BY

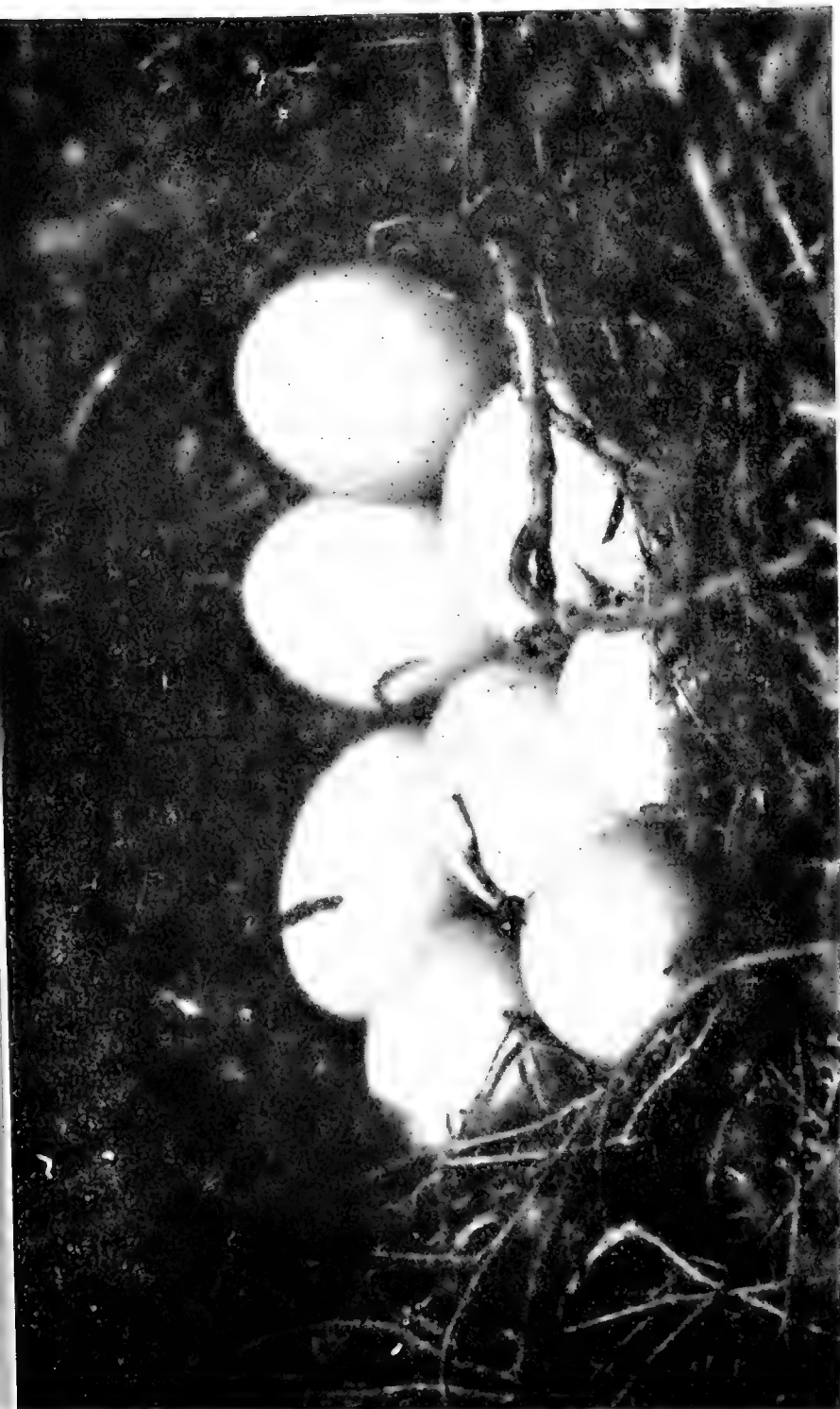
WILLIAM E. GLEGG.

To Dr. W. Eagle Clarke must be accorded the credit for first recording the nesting of the Red-crested Pochard (*Netta rufina*) in the Delta of the Rhône. In his first paper in the *Ibis*, April 1895, Dr. Clarke states that five or six pairs frequented the Etang de Consécanière and that others were observed in several localities in the southern portion of this district as far east as the mouth of the grand Rhône. In the second contribution, *Ibis*, October 1898, Dr. Clarke expresses surprise at the number of this species seen with other ducks on the Etang de Consécanière on September 23rd. Apparently the numbers of Red-crested Pochards seen were much greater than in the nesting season of 1894. In his paper in the *Field* of September, 1908, Mr. Collingwood Ingram confirms Dr. Clarke's discovery, as he states that he found the nest of this Pochard in the same locality.

To what extent the Red-crested Pochard winters in the Camargue does not seem to be known. Mr. L. Griscom, who made a brief stay at Stes Maries in the winter 1918-19, does not record this bird, but considering the vast numbers of ducks he describes as being present—he refers to 100,000 Wigeon and a similar number of Mallards, to say nothing of other species—the Red-crested Pochard may have been overlooked.

For some years it had been my intention to visit this famous bird district, and this year, 1924, I was able to make the journey, being accompanied for part of the time by Mr. H. Sagar. As the Flamingo was our chief object, on the day after our arrival at Stes Maries, May 18th, we made for the Etang du Valcarès, and it was on this extensive étang that we first made acquaintance with the Red-crested Pochard on May 22nd, when four were seen. From May 25th for several days onwards one of my hides was in position for other species on one of the islands of this étang and repeatedly I flushed a Red-crested Pochard duck from the thick vegetation with which some of these islands are more or less covered.

Occasionally I searched for the nest, which obviously was close at hand, but as I was otherwise engaged, my search was perfunctory and not rewarded with success. On May 30th having completed my other photographic work, I was able to pay attention to the Pochard. I approached the island with



NEST OF RED-CRESTED POCHARD.

as little noise as possible, keeping a sharp lookout for the duck. I reached the vegetation, which marks the high-water line of the island, before she left the nest, which was then easily discovered. It was completely hidden in the centre of a thick bush about two feet high, with an entrance leading into an open lane in the bushes; probably this had not been made by the duck. The nest, formed of thick bents interwoven with down, was placed on the ground and contained eight eggs. The colour of these eggs may be described as creamy-white. On June 6th on the same island I found another nest of this species, containing one egg. Jourdain, in Millais' *British Diving Ducks*, says of the Red-crested Pochard: "When fresh, the eggs are a clear green stone-colour with a gloss." The single egg found answered to this description. Apparently the colour of the eggs changes as incubation advances. Dr. Clarke describes a nest containing seventeen eggs of two different types, one set being white and the other of normal colour.

When I resolved to attempt to get photographs of this duck, I looked upon it in the nature of a forlorn hope. Firstly I considered ducks as difficult subjects, secondly the position of the nest, not only completely concealed, but also surrounded by thick vegetation, limited severely the chances of success. This meant that the duck could be photographed only in the narrow lane in the vegetation previously referred to. My hide was placed so as to look along this lane to the entrance of the nest. When I approached the nest on May 31st to make a start with the camera I found the duck off the nest and the down pulled partially over the eggs. Sweeping the étang with my glass I saw a male closely accompanied by two females, one of which was probably the owner of the nest under observation. I took up my position in the hide, but never saw the duck. My next visit to the nest was on June 3rd. On my approach the duck left the nest and settled on the water close to the island. I was in the tent less than half-an-hour when she made her appearance in the lane, faced the hide, disappeared into the bushes, then again came into the lane, went straight to the nest and settled down. After shifting several times she took up a position with her back to me and her head turned to the side so that I could see the bill and the brown head. When she seemed well settled I made a slight noise, which had the desired effect of making her appear in the lane in the full blaze of the sunlight. She hesitated, looking round as though the brilliance of the light after the shade of the nest had momentarily confused her,

out the noise of my camera shutter sent her off. She soon returned to her maternal duties, although I did not see her; apparently she had made another entrance to her nest, to avoid coming within view of the hide. This still further



APPROACHING EGG REMOVED FROM NEST.

reduced the chances of success with the camera. About 10 p.m., ninety minutes having elapsed, I startled her suddenly when she was dozing, and, as I had hoped, was taken off her guard and momentarily showed herself in the nest. On my return next day I examined the nest and

found, as I had suspected, that a new entrance hole had been formed at the back. The duck came as quickly to the nest as on the previous day but by the new entrance. She settled down firmly and, in spite of the loudest noises I could make, declined to move. As the situation appeared hopeless I left the hide at 1.30 p.m. On this occasion the duck put her head out of the nest and gave me a good opportunity of examining her bill, which I describe as slate-black with the tip red. This seems worth recording, as no such description may have been given of the bird in a wild state. On referring to books I find that Saunders says "dull red"; *A Practical Handbook*, "reddish-brown"; Dr. Hartert "bräunlichrot, an der Spitze rötlicher"; and Dresser "blackish with a red tip." The last is the best description of the colour of the bill of the living bird.

I left the Pochard alone until June 6th and in the meantime had given some thought as to what could be done to induce the bird to show itself. It occurred to me that if an egg was removed from the nest and placed in the open lane she might try to replace it. On arriving at the nest I immediately put the idea into execution. The Pochard was soon back to the nest. I could see her approaching through the vegetation as her head bobbed up repeatedly, and when this happened a Black-headed Gull (*L. ridibundus*), which had its nest near, and Gull-billed Terns stooped at her fiercely. The ruse, although not completely successful, was not altogether ineffective. As soon as she reached the nest she noticed the egg outside and came forward to it, but the noise of an exposure sent her back to her eggs from which she would not be moved. Later, I went out and opened up the nest considerably, but this marked alteration had no effect on her devotion to her nest. When the Pochard returned to her nest she invariably rearranged the down and it was noticeable that, like other species, she was affected by the heat as her bill was very often open. As the duck had become so indifferent to my hide and my presence I decided to put a finish to my work on June 7th by opening the nest fully and getting good photographs, which I have no doubt could have been accomplished. When in sight of the island with another half-mile of water, from eighteen inches to two feet deep, to wade, I noticed something moving on the island. Putting my glass up I saw that my hide had gone and two horsemen were present, one of whom had my hide, etc., on the back of his saddle. They paid no attention to my shouts and moved off through the étang. This brought my photography



DUCK ON CONSIDERABLY OPENED NEST.

to an end, for on the following day on going to where I had placed my second tent I found that it also had been taken. On my last day, June 12th, in the Camargue I paid a final visit to the nest and found the number of eggs reduced to seven and another was about to hatch out.

If my experiences with this individual are any guide to the habits of the species, the Red-crested Pochard must be described as a very close sitter. At no time did I see a male anywhere near the nest. This duck never uttered any note in my hearing, but once when I flushed several from another island a female uttered a grunting sound which was distinctly dissyllabic.

With regard to the breeding status of the Red-crested Pochard in the Camargue no report seems to have been made since Mr. Ingram's visit. I am not in a position to speak of all the ground covered by Dr. Clarke. I spent nearly a month in the Camargue with my headquarters at Stes Maries and it may be said that only the district within walking distance of this village was worked. Considering Dr. Clarke's statements it would seem that this duck has probably increased somewhat, although not greatly, in the thirty years that have elapsed. Within the limits of our district the Red-crested Pochard was *the* duck. The only other identified was the Mallard and it was not common. Strangely enough, although I waded almost its entire length, I saw no ducks of any kind on Consécanière, but there were plenty of Great-crested Grebes and Coots. I paid special attention to this étang in the hope of finding the Pintail. The Red-crested Pochard was nearly always seen on the Etang du Valcarès, but we found it in greatest numbers on the open water in the Marais du Couvin. Millais describes the habitat of this species known to him as "Pieces of stagnant water of large circumference whether the water be salt or fresh, with a great deal of sedge or reeds on the banks, green islands," etc. He adds "The usual habitat in North Africa is somewhat different. Here they live in the centre of great shallow lagoons of brackish water, whose sides are often encrusted with saline deposits." In the Camargue both of these types of habitat are found. The first is represented by Consécanière and the étangs to the west of it and the second by the great saline expanse of Valcarès.

A STUDY OF THE ROBIN BY MEANS OF MARKED BIRDS (SECOND PAPER).

BY

J. P. BURKITT.

THE present paper is a sequel to that appearing in Vol. XVII., p. 294-303, and brings my study up to the beginning of June, 1924. On January 6th when my previous study ended I had in my area of observation the following marked birds: 1 M., 9 M., 15 F., 18 (M.), 19 (M.), 20 (M.), 21, 22, 23, 25, 26 (M.), 27 (F.), (28), 29, 30, and two unmarked birds which I shortly afterwards I ringed as 31 and 32 (M.). (I put in brackets the sex discovered later.) These were each in definite occupation of a site with the following exceptions: No. 20 had recently been only noticed at long intervals and in ground which meanwhile seemed to be fully occupied by others. No. 28 had been first noticed on November 4th, 1923, was ringed on November 18th, but was not noticed again till February 9th, 1924, and was not seen thereafter. No. 27 was first noticed on November 5th, 1923, but was not noticed between November 16th and January 6th, 1924.

INDICATIONS OF SPRING MOVEMENTS.

Second Half of January.—Five birds left, viz., 15 F., 23, 25, 29, 30. One resident, 22, extended its territory and shortly afterwards left it altogether to occupy a neighbouring vacant territory. One pair was formed, viz., 20 M., 27 F.

First Half of February.—One female, 34, arrived which formed with one of the resident males, 2, my second pair. Three resident males, 9, 18, 21, were noticed to make temporary excursions into strange territory, as further described below. Four birds were noticed temporarily, one of which was 28 referred to above. (These were presumably passing by; and of course there were probably many more than I noticed.) One resident male, 19, disappeared for five days and reappeared with a marked female, 11, which had not been seen since early in June, 1923. These latter formed my third pair.

Second Half of February.—One male and one female, 35, came to stay; the latter, with 32, forming my fourth pair. Three birds on passage were noticed. One recently mated pair, 11, 19, extended their territory.

First Half of March.—Two birds on passage were noticed. Two females, 36, 37, came to stay and formed with 9 and 26 respectively my fifth and sixth pair.

Second Half of March.—One male, 38, arrived to reside in an exposed territory unoccupied since the middle of November. A pair, male and 39, arrived to a still more exposed territory on the summit of a hill which was previously considered to be unoccupied. These latter formed my seventh pair.

On *April 2nd* a marked female, 14, arrived, which had not been seen since the end of June, 1923. She formed with one of my residents, 18, my eighth pair. Her arrival immediately caused my latest departure, namely, the ejection of 31 from its territory by this last pair, though their first territory was a most ample one. The two territories thence became one.

On *April 6th* an unmated male made an excursion far into strange territory. Finally at some date, in the second half of April I think, a female, 40, arrived and formed with 38 my ninth pair.

Two of my winter residents were thus left unmated, 21, 22; it is quite safe to assume from their habits that they were males. I should add that with the one exception, 31, all the departures appeared to be voluntary and not caused by any local circumstances.

My previous suggestion (*supra*, p. 297) that there is a distinct movement about the end of January and beginning of February is corroborated this spring, inasmuch as practically all the birds which were going to leave me departed in the second half of January. The arrivals kept coming throughout February, March, and part of April.

SEX OF RESIDENTS AND MIGRANTS.

Of my nine winter residents which did not leave, all were males except one, 27, and it will be noted from above that she had only recently and erratically appeared. Of the ten immigrants to nest here, two were males taking exposed and unoccupied ground, all the rest were females. Two of these had left after breeding here in the previous spring; that is to say, of the three such females which left for the year, two returned. Thus of seven resident and two immigrant males none had for mate a resident female except the indecisive case of No. 27 F. (Of course "resident" is only strictly in reference to my piece of ground, but probably applies much wider.) Of the birds noted by me on passage most of them were presumably females, as practically all of them were in temporary and peaceable companionship with my resident males. Excitement was frequently evident among neighbouring males when one of these females passed along.

Of the six or seven birds which left me only one, 15, was of known sex and it was a female. The one which was evidently ejected by force, 31, was presumably a male.

RESIDENT YOUNG OF THE PREVIOUS YEAR.

I am not able to record any special attribute applying to the young birds which secured sites from last mid-summer onwards, except that of those five (18, 19, 20, 21, 23) which I was almost certain belonged to this class none left me in the autumn of their first year. One left me this spring, 23; four remained, three of which, and probably the four, were males. One, 20, got a mate first in the season; one, 19, got an early mate; one, 18, was nearly the last to mate; one, 21, got no mate.

FEMALE SONG.

The marked female, 15, which I had once or twice noticed singing in October 1923 (*supra*, p. 299), did not draw my attention by further song before it left in January. Of the other four or five birds which left me (voluntarily) this spring I had known all but one to sing frequently, and three of them were quite normal winter singers; one of the three had been a particularly good singer. But I have no proof yet of what sex these birds were. Bird 27 (see above) which turned out to be a female was not heard to sing before mating with 20 (or after). Therefore the hope expressed in my previous article, that I should have much more data about female song, has not been fulfilled. None of the females which came to reside here this spring were noticed to sing after arrival except in the case of 14. She was first seen on April 2nd in the territory of 18 M. and caused excitement not only to him but to an adjoining bird, 31. She at once appeared aggressive to 31, even more so than her ultimate mate (18) did. She acted towards 31 as a male would to another male, following and squaring up to him, and sang at such moments a couple of bars with wide open beak. The next day 31 had disappeared, and 14 was again noticed to sing a year or two that day, but never thereafter. For the female to sing in matehood would seem an absurd contradiction to the concealment she practices (see below).

SONG IN GENERAL.

About the fourth week in January the males in singing begin to perch higher, even to the tops of trees (just as is the spring habit of many species, even hitherto shy ones like the Blackbird). As long as they remain mateless they nearly always sing well up and exposed; but mated ones will not

necessarily do so, and more usually do not. From early March the mated birds give distinctly less song than the mateless. The latter's song keeps full-bodied and far-reaching. One of my males after his mate was killed was at once noticeable by much more and louder song. (I have written elsewhere about this applying to other species.) In the first stage of matehood the male does not sing much, but follows the female about. In the next stage he sings more, but does not move after her. He, like the males of other species, thus gives the impression of being anxious to keep the female to her position. Like other species also the Robin seems to start a spring evening dusk song, which this year began about the middle of February. But to draw up any hard and fast rules about Robins' song during the main song-period seems particularly hopeless; the why or the when of it. I may remark that my male which was the latest to get a mate had always been a first-rate singer and its territory was most ample and apparently most attractive.

It seems undeniable that *ceteris paribus* the Robin (more so than other birds) sings under what human beings would call cheery conditions. But why a Robin should consider as cheery a hard, frosty, sunny morning with no prospect of thaw for hours, or a crisp, quiet evening with the ground all deep in snow and setting to hard frost—I do not know.

My tamer Robins, used to being fed, undoubtedly start song on sight of me, but one would say that the cheery condition there is the prospect of food.

When, however, we turn to the generally accepted theory that song is a concomitant of territory, this short study of mine indicates that territories are in force to a greater or less extent in every month of the year; therefore we should expect some song in every month of the year, which there is. Moreover, the period in which it is least heard is at a time either of moult or when much of the ground may, according to my last summer's observations, be under interregnum and awaiting redistribution.

The approach of the complete stoppage of song in the first days of June was first evinced this year by one of my mateless birds giving up singing about the 21st of May. It was not that he had left. His failure to sing even when I produced food was remarkable for him.

TERRITORY, ETC.

My ambit this season, in which I had the nine pairs, took in a little more ground than the area of my previous article.

one first-rate territory in it, a line of hedge and bank, was not occupied at all this breeding season. It will be seen from the table below that 9 has had three mates. In 1923, after he is having a brood with 14F., it was found that the latter had mated with a new male, 17, for her second brood, and that this pair had taken a slice off the territory of 9. His territory has remained the same since then. I have referred to several excursions by males into strange territory in the mating season. Those which I noticed were from 120 to 200 yards outside their own boundary. They may have gone further and of course there were probably many more of them.

The two marked females, 11 and 14, which returned became mated in territories, part of which in each case was a part of their previous years' territory. One of these, No. 11, whose previous two nests on the flat ground had been unsuccessful, now built in the ivy, 23 feet up a tree, a few yards from her last nest. The attitude at the mating period of one bird squaring up to another and waving the head from side to side, I had in the past assumed to be courting. But my experience would now show that this is always animosity; not necessarily of male to male only.

CONCEALMENT OF FEMALE.

This occurs during a long pre-brood period. I have referred to it, Vol. XVII., p. 296. It may not be practised for some time after mating but is especially the case after February; if the bird arrives later than February, the concealment begins at once. Though the bird may be very tame previous to this practice, she becomes as shy as the rest. While the male sits aloft the female ferrets along somewhere low down or remains motionless in hiding. If she is seen at all she always manages to keep something between her and the observer. If one did not know to the contrary, by early observation at the times of arrival, a later observer would certainly have thought that most of my males were mateless.

No. 27 was mated about mid-January, but it took me a month to get satisfactory identification of her marking, and even after that I thought she must have departed. Out of ten nests I only found three by seeing building operations. One pair close to my house, and mated on February 3rd, were given very much attention, yet throughout four tedious months I never discovered a nest, even though the male frequently fed her, and there were usual indications that she was sitting. I do not think they could have ever been successful in a brood or else they would surely have disclosed

the secret. This concealment of the female also makes the catching of them by bait practically impossible at that period.

CATCHING AND NUMBER MARKED.

I found that it was necessary to train many birds to get used to oatmeal grains long before I could catch them. Such birds at first had no idea that it was food, even hopping over it without touching it; once they learned it, however, it continued an evidently seductive food, right into summer. The total number now marked is forty. One female, 36, was killed when commencing to sit, by a cat, of which there were several always near.

LONG PERIOD FROM MATING TO LAYING.

I had always considered Chaffinches remarkable in the length of this period, which in their case may be up to nearly seven weeks. But one of my Robin pairs was fourteen and a half weeks, while four others varied from eight to nine and a half weeks. From mating to the commencement of building operations there was in four cases a period of from seven to nine weeks. I had not data about all. I never expected this long interim, and thus many weeks of observation were in vain. Late arrivals may have eggs earlier than some of the others. In the specially long instance above, there was for some unknown reason a delay of over three weeks after the nest appeared to be ready, before laying commenced.

My earliest pair abandoned their first nest and five eggs for no apparent reason, unless the cold. Anyhow, it is an instance of this happening without change of either parent.

In the appended table any male mentioned as extant has, unless otherwise stated, been keeping to the same site from the time it was first seen or marked up to the writing of this article, viz., end of May, 1924.

No.	Sex	First noticed in occupation	Date Marked	Mate 1923	Mate 1924	Disappearances, Reappearances, and other Notes
1	—	—	-/10/22	—	—	Disappeared soon. 1, 8, 9 were marked consecutively in the same site. Died soon. Extant. 36 was killed. The other female arrived in June 1924 after the period of this article.
8	—	—	17/12/22	—	—	
9	M	—	14/1/23	14	36 and another	
2	M	—	-/10/22	10	34	Extant.
3, 4,	—	—	10 and 11/22	—	—	} Not seen after end of 1922.
5	—	—	-/11/22	—	—	
6	—	—	10/12/22	—	—	Not seen after January 1923.
7	—	—	10/12/22	—	—	Not seen after end of 1922.
10	F	—	21/1/23	2	—	Not seen since May 1923.

No.	Sex	First noticed in occupation	Date Marked	Mate 1923	Mate 1924	Disappearances, Reappearances, and other Notes
11	F	—	4/2/23	not marked	19	Not seen between June 1923 and February 1924. Extant. For song see Vol. XVII., p. 298, and for 1924 site see this article.
12	—	—	8/2/23	—	—	Not seen since marking. Probably a bird on passage.
13	?	—	4/3/23	?	—	Not seen since May 1923. No further data. Probably the female parent to a brood in 1923.
14	F	—	4/5/23	9 and 17	18	Not seen between June 1923 and 2/4/24. Extant. For song and for 1924 site see this article.
15	F	—	8/5/23	16	—	Not seen between July and October 1923, nor since January 1924.
16	M	—	9/6/23	15	Not marked	Not seen between June 1923 and January 1924. Extant (?). He may have been near-by all the time. No further data.
17	M	—	25/6/23	14	—	Not seen since June 1923.
18	M	—	30/7/23	—	14	Extant. Born 1923.
19	M	2/7/23	9/9/23	—	11	Extant. Born 1923.
20	M	8/8/23	12/9/23	—	27	Extant. Born 1923. Territory doubtful till January 1924.
21	? M	8/8/23	16/9/23	—	None	Extant. Born 1923.
22	? M	—	22/9/23	—	None	Extant. Changed territory in January 1924 to neighbouring vacated one.
23	—	17/6/23	23/9/23	—	—	Born 1923. Not seen since January 1924.
24	—	5/10/23	13/10/23	—	—	Not seen since October 1923
25	—	8/10/23	22/10/23	—	—	Not seen since January 1924.
26	M	—	26/10/23	—	37	Extant.
27	F	5/11/23	16/11/23	—	20	Not noticed between marking and 6/1/24. Extant.
28	—	—	18/11/23	—	—	Not noticed between marking and 9/2/24 and not seen since.
29	—	1/11/23	22/11/23	—	—	Not seen since January 1924.
30	—	—	6/1/24	—	—	Not seen since January 1924.
31	? M	30/12/23	24/1/24	—	—	Not seen since April 1924. Ejected in April 1924 by 18 and 14.
32	M	28/10/23	3/2/24	—	35	Extant.
33	F	20/2/24	2/5/24	—	Not marked	No further data.
34	F	3/2/24	1/3/24	—	2	Extant.
35	F	16/2/24	3/3/24	—	32	Extant.
36	F	8/3/24	9/3/24	—	9	Killed on 8/5/24.
37	F	4/3/24	12/3/24	—	26	Extant.
38	M	19/3/24	28/3/24	—	40	Extant.
39	F	19/3/24	19/5/24	—	Not marked	Extant.
40	F	-/4/24	22/5/24	—	38	Extant.

OBITUARY.

WILLIAM ROBERT OGILVIE GRANT.

MR. W. R. OGILVIE GRANT, who died on July 26th, 1924, was well known as an active ornithologist and head of the Bird Room at the British Museum up to 1916, when he was suddenly struck down by paralysis and had since lived in retirement near Reading. To his intimate friends his loss will be keenly felt, for he was of an affectionate and generous nature, and though he has been missing from the ornithological world for so long, there are many in the large circle who knew him who have kept a warm corner in their hearts for him. He made enemies, too, for he was imbued with an ardent and combative spirit, and this trait frequently led him into arguments which were not always unaffected by personal feeling.

Ogilvie Grant was born on March 25th, 1863, the second son of the Hon. G. H. E. Ogilvie Grant, his mother being a daughter of Sir William Gordon-Cumming. He was educated at Fettes, and in June, 1882, became an assistant in the Zoological Department of the British Museum, at first under Dr. Gunther in the fish section and in 1885 under Dr. Bowdler Sharpe in the bird room. In 1893 he became a first class Assistant and in 1913 was appointed Assistant Keeper of the Zoological Department.

Ogilvie Grant wrote Volume XXII. (Game Birds) of the *Catalogue of the Birds in the British Museum* and parts of Volumes XVII. and XXVI. of the same great work, and Volume V. of the *Catalogue of Eggs*, while he was also author of the *Guide to the Bird Gallery* and of the *Game Birds* (2 vols.) in Allen's *Naturalists' Library*, and was responsible for the natural history of the birds in *The Gun at Home and Abroad* and for the bird section in H. O. Forbes's *Fauna of Sokotra and Abd-el-Kuri*. He contributed a great number of systematic papers to the *Ibis* and communications to the *Bulletin of the British Ornithologists' Club*, of which he was editor for a number of years. He also contributed papers and notes to the *Proceedings and Transactions of the Zoological Society*, the *Field*, *British Birds* and other journals. Undoubtedly his best work was done in the game birds. Among the many new birds he described must be mentioned the Irish Coal-Tit (*Parus ater hibernicus*).

As a collector Ogilvie Grant excelled, and he made journeys for this purpose to Sokotra (with H. O. Forbes), Madeira, the

Canary Islands and the Azores, while he was largely responsible for the work of organizing and financing other expeditions, such as those to Ruwenzori and Dutch New Guinea, which made valuable additions to the British Museum collection. He also procured, or himself collected, the material for a number of the nesting groups of British birds in the Museum.

As "curator" of the great systematic collection he was not so successful, as he unfortunately did not realize the significance and great importance of the sub-species, and thus following Bowdler Sharpe (who was also reactionary in this respect, though his age excused him) the arrangement of our great national collection fell sadly behind the times. That this had a serious effect on British ornithologists is undoubted, and although great endeavours have been made, and much has been done since the war to arrange the collection in a form suitable for modern work, the task is so great that it is as yet by no means completed, and ornithologists are in consequence even now handicapped by the long neglect to progress with the times. During his later years at the Museum Ogilvie Grant was beginning to realize the importance of sub-specific distinction, and it is fair to assume that had he continued there he would have seen how urgently necessary was a rearrangement of the collection.

Ogilvie Grant served on the Council of the British Ornithologists' Union, Zoological Society and Avicultural Society, as well as the Royal Society for the Protection of Birds, and was active in promoting bird protection and nature reserves.

He married, in 1890, a daughter of Vice-Admiral Mark Pechell, who survives him with one son and three daughters.

H.F.W.

NOTES

INTERVAL BETWEEN BROODS OF DOUBLE-BROODED BIRDS.

WITH reference to Mr. Astley's letter on the above (*antea*, p. 72), I see from my note book that on May 26th, 1923, I found in a wood near Ipswich the nest of a Redstart (*Phœnicurus ph. phœnicurus*) in which the eggs were just hatching. On June 11th I visited the nest again and found the young ones had gone, the nest had been "tidied up," and contained one fresh egg. T. G. POWELL.

[This is a very interesting case as it furnishes indisputable proof that the Redstart is, sometimes at any rate, double-brooded.—F.R.C.J.]

NOTES ON THE BIRDS OF SCILLY.

THE following details of two short visits to the Isles of Scilly (September 21st to 30th, 1920, and June 21st to July 4th, 1924) may be of interest in view of Mr. H. M. Wallis's notes in *British Birds* (Vol. XVII., p. 55; XVIII., p. 73), where a comparison was made with Clark and Rodd's article in the *Zoologist* of 1906.

Greenfinch (*Chloris c. chloris*).—Many in the Tresco gardens on June 30th, 1924; doubtless family parties.

Linnet (*Carduelis c. cannabina*).—In great abundance; a nest found on St. Mary's on June 21st, 1924, contained four eggs on July 3rd.

Chaffinch (*Fringilla c. cœlebs*).—Several on Tresco, June 30th, 1924; one singing.

Corn-Bunting (*Emberiza c. calandra*).—Fairly common in almost all parts of St. Mary's in 1924.

Skylark (*Alauda a. arvensis*).—Fairly common in September, 1920; in 1924 quite abundant on St. Mary's and also singing on Bryher.

Grey Wagtail (*Motacilla c. cinerea*).—One or two in September, 1920, on St. Mary's.

Pied Wagtail (*Motacilla alba yarrellii*).—Recorded by Clark and Rodd as "common all the year round," but I saw only one or two on St. Mary's in September, 1920, and none at all on any island in 1924.

White Wagtail (*Motacilla a. alba*).—In 1920 a fair number in September on St. Mary's. A few days earlier—on September 20th, in the same year—I saw fully fifty on Marazion Marsh, near Penzance, on the mainland.

Great Tit (*Parus major newtoni*).—Seen twice in September, 1920; in 1924 not uncommon on St. Mary's and Tresco, and also seen on Bryher.

Goldcrest (*Regulus regulus*).—On Tresco and St. Martin's in September, 1920, and in some numbers on June 30th, 1924, in the Abbey Gardens, Tresco, where they had evidently bred.

Chiffchaff (*Phylloscopus c. collybita*).—Two or three singing among the large trees on Tresco on July 2nd, 1924, where we watched two for some time; not recorded previously during the summer months.

Sedge-Warbler (*Acrocephalus schænobæus*).—In 1924 quite common on St. Mary's in two suitable areas, where we saw many pairs; a nest found on June 27th was just ready for eggs and contained four on July 2nd.

A number on Tresco in marshy ground on July 2nd.

Whinchat (*Saxicola r. rubetra*).—One on St. Mary's on September 22nd, 1920. Recorded by Clark and Rodd in autumn as a casual only.

Swallow (*Hirundo r. rustica*).—Nesting in 1924 on St. Mary's, Tresco and Tean; I saw five nests with eggs and young.

Kingfisher (*Alcedo atthis ispida*).—Seen half-a-dozen times in September, 1920, flying along the coast of St. Mary's and in the harbour; one was flying between St. Mary's and Tresco on September 25th. Clark and Rodd record it as a casual autumn and winter visitor.

Great Northern Diver (*Colymbus immer*).—Mr. H. W. Robinson tells me that on May 30th, 1924, he saw four between St. Mary's and Tresco and that one was still in winter plumage or immature—the first of the many he has seen in Scilly in May to be in this plumage.

Grey Plover (*Squatarola s. squatarola*).—Two or three on St. Martin's, September 28th, 1920.

Turnstone (*Arenaria i. interpres*).—Abundant during both visits; in flocks of twenty at the end of June.

Ruff (*Philomachus pugnax*).—In 1920 two on September 24th and one on September 29th by a freshwater pool on Bryher. Three previous records only, given by Clark and Rodd—the latest in 1885.

Sanderling (*Crocethia alba*).—On St. Mary's and St. Martin's in 1920—not more than fifteen together.

Common Sandpiper (*Tringa hypoleucos*).—Mr. H. W. Robinson and I saw one by the Abbey Pool, Tresco, on June 30th, 1924; not previously recorded in summer.

Redshank (*Tringa t. totanus*).—Several on Samson and Tresco among the Turnstones on June 23rd, 1924. Clark

and Rodd record it in autumn and winter only, and in September, 1920, I found it fairly common.

Greenshank (*Tringa nebularia*).—Single birds several times and once two together seen on St. Mary's and St. Martin's in September, 1920.

Whimbrel (*Numenius p. phæopus*).—Several on Bryher on the last day of June, 1924.

Common Tern (*Sterna h. hirundo*).—Breeding on at least four islands in 1924, though one old haunt was deserted. Mr. Robinson and I ringed 191 youngsters on one island and there were many eggs still unhatched.

Arctic Tern (*Sterna macrura*).—Mr. Robinson saw a single bird on June 26th, 1924, and possibly one pair was nesting among the Common Terns, but I never identified the bird satisfactorily at the nest, nor heard its call.

Roseate Tern (*Sterna d. dougallii*).—On June 26th, 1924, we found a pair in a colony of Common Terns and four days later watched them through a telescope and saw the bird sitting on its nest; one egg was chipped and one youngster hatched, which was easily distinguished from the young Common Terns on the same island. Mr. Robinson saw this nest with me.

Black-headed Gull (*Larus r. ridibundus*).—As this bird has not been known to nest in Scilly since 1845, it is perhaps worth noting that we saw it twice in June by the freshwater pool on Bryher, and on July 4th, 1924, in St. Mary's Harbour. It was not common in September, 1920.

Quail (*Coturnix c. coturnix*).—On September 30th, 1920, at noon, one came on board the S.S. "Peninnis" half way between Scilly and the mainland, and I released it next day at Penzance.

A. W. BOYD.

ABNORMAL EGG OF CARRION-CROW.

I TOOK a nest of Carrion-Crow (*Corvus c. corone*) at Coat, Martock, Somerset, on May 14th, 1924, with three eggs. Of these two were normal, but the third was the largest I have ever handled, measuring 54×31.8 mm. As compared with the average Raven's egg, it is considerably longer, though, of course, not so bulky.

JOSEPH H. SYMES.

[Extremely elongated eggs of the Carrion-Crow are occasionally met with, and I have examined specimens measuring 49.4×32.1 and 49×32.5 mm., but the above recorded egg is longer than any of which I have notes.—F. C. R. JOURDAIN.]

UNUSUAL SITUATION OF CHAFFINCH'S NEST.

WITH reference to Mr. R. H. Brown's note (*antea*, p. 72) on the brooding of a Chaffinch (*Fringilla c. cœlebs*) the following observations are taken from my notes for 1923. They are from a district of Midlothian about 1,000 feet above sea level where the resident smaller birds are late in nesting.



On June 2nd, the first really warm day of the season, every Chaffinch seemed to be occupied with building and work was proceeding at a great pace. One nest found was in the top of a partly rotten and hollowed out fence post alongside a rather straggling hedge of hawthorn. By the 17th of the month this nest was complete with a lining of feathers, and in the morning the hen bird was sitting although no eggs were laid when I visited the nest later on in the day. A week later the nest was still quite in order and still no eggs had been laid, although the birds were still frequenting the hedge. By June 30th the nest was ruffled up and

apparently deserted, but there was another nest in the hedge a few yards away which may have been the work of the same pair. As the nest in the fence post was in a fairly unusual position I enclose a photograph. I can remember seeing one in a somewhat similar position when at school, and in that case the post was not hollowed out, but the nest was partially supported by branches of the hedge growing against the fence.

CHARLES G. CONNELL.

SCARCITY OF YELLOW WAGTAIL.

WITH reference to the notes (*antea*, p. 55) on the scarcity of the Yellow Wagtail (*Motacilla f. rayi*), I had been particularly struck by their scarcity in N.W. Norfolk before I read the notes. There is a small heath about a quarter of a mile from my bungalow where every year three or four pairs have nested. On April 17th, 1924, I saw one Yellow Wagtail at this spot, but never saw it again and am quite sure that they did not breed there this year. I saw one other Yellow Wagtail on some grass marshes about the end of May which I think must have had a nest near by. Beyond these two I did not see any others, although I went to several places where usually they are quite common.

N. TRACY.

VARIATION IN BREEDING SEASON OF THE WHEATEAR.

WITH reference to my note on the breeding season of the Wheatear (*Enanthe æ. ænanthe*), Vol. XVII., p. 143, I now give the figures for Sea'ord, Sussex, during the last three years:—

Year.	No. of Nests.	Average date of full Clutch.	Earliest.	Latest.
1922	.. 11 ..	May 12th ..	May 4th ..	May 19th
1923	.. 13 ..	April 28th ..	April 24th ..	May 7th
1924	.. 12 ..	May 4th ..	April 27th ..	May 12th

It will be seen that 1924 was six days later on the average than 1923.

J. F. THOMAS.

REDBREAST NESTING IN WOODPECKER'S HOLE.

ON July 19th, 1924, I found the nest of a Redbreast (*Erithacus v. melophilus*) containing young in an old Woodpecker's hole twelve feet up a poplar tree at South Wooton, Norfolk. The young birds left the nest on July 25th. The site seems rather an unusual one, but I think it may be accounted for by the fact that I have had many disasters

with my ground-building birds this year through the agency of rats. N. TRACY.

WOODPECKERS AND FIR-CONES.

WITH reference to my former note on this subject, Vol. XVII., p. 276, the Greater Spotted Woodpeckers (*Dryobates m. anglicus*) left off working on the fir-cones in N.W. Norfolk on April 13th, after which I did not hear them until August 9th, when I once more heard the old familiar sound. I had not time just then to investigate, but the next day I went round to some of their favourite feeding places and picked up about a dozen freshly worked green cones. I am rather surprised at the birds tackling the cones at this time of the year, as there cannot be any insect shortage yet; but they evidently acquired a taste for the seeds during the winter and are now varying their insect diet with a vegetarian one. After the Woodpeckers left off working on the cones in the spring, I found them tackling oak galls. These they wedged in circular cavities which they had cut in the bark of some dead fir stumps, and then split them in two to extract the grubs. In one instance they used a cleft where they had been working fir-cones. A few days ago I found on the top of one of the fir stumps some crab-apples which had been split open for the seeds, evidently by the Woodpeckers. N. TRACY.

STOCK-DOVES BREEDING IN CO. MAYO.

I HAVE already drawn attention (Vol. XVII., p. 312) to the fact of the Stock-Dove (*Columba ænas*) having extended its range to co. Mayo, and mentioned the possibility of its having nested in 1923. I have now proof of its nesting, having found a bird incubating on May 27th, 1924. The nest was on the top of an ivy-covered wall. There were almost certainly three other pairs nesting in the vicinity of the house, but owing to the number of suitable nesting-sites and the thick foliage of the trees, I was only able to discover definitely the whereabouts of one of these. ROBERT F. RUTLEDGE.

LATE NESTING OF THE COMMON SNIPE IN KENT.

ON July 7th I was shown two nests of the Common Snipe (*Capella g. gallinago*) situated in a water meadow of rank grass about a quarter of a mile from the river Medway in the parish of Nettlestead, Kent. Each nest contained four eggs. That the Snipe is increasing as a regular nesting species in Kent is well known, but I have never seen *two* nests close to each other in July. Mr. Meade-Waldo tells me that Snipe

have two broods in the year and *sometimes* three nests; this would bring the third brood well into July.

My own experience is that all "Waders" that I have observed in the British Isles will go on laying eggs and try to bring up their young, if the nests are destroyed, almost indefinitely.

Would any have *three* broods, and some two, under normal circumstances? JAMES R. HALE.

[Eggs of the Snipe have been recorded on several occasions in August, but in my opinion such cases are not due to second or third broods, but merely to repeated destruction of previous layings.—F.R.C.J.]

LARGE CLUTCHES OF COMMON TERNS' EGGS IN SCILLY.

THANKS to careful protection from two-legged as well as four-legged robbers of their eggs, the Common Tern (*Sterna hirundo*) has again, this year (1924), become fairly well established as a breeding species in the Isles of Scilly. Clutches of four eggs among Terns are so unusual that it may be of interest to state that on one island there were three such clutches, one of these being still unhatched on June 30th. On another island I was astonished to find a clutch of five eggs, the fifth egg being upright with the thin end downwards. In each clutch the eggs were all of one type and evidently belonged to one bird in each case, rather than to two hens laying in one nest. The clutches this year were all large; for instance on one rock ten out of the eleven nests contained clutches of three, and the eleventh a clutch of two. H. W. ROBINSON.

[Nests containing four eggs are not very unusual in large colonies of Common Terns and at the Farnes I have seen four sets of four eggs each in a patch not more than five yards square, while only a few yards off were two more clutches of four. In some of the Norfolk colonies clutches of four occur annually, sometimes in considerable numbers.—F.C.R.J.]

LESSER BLACK-BACKED GULL NESTING IN COLONY WHERE HATCHED.

As dead Lesser Black-backed Gulls (*Larus fuscus affinis*) are very rare in the breeding colonies, one or possibly two per season being the number found in the large colonies with which I have been associated during the past fifteen years, there are no records of ringed birds of this species returning to nest in the colony in which they themselves were hatched. On July 29th, 1924, I visited the large colony in Westmorland

and found one adult dead. It was sitting in a natural attitude as if alive, with neck straight and head held high, and, although cold, the eye showed that the bird had died that day, and recently, for it was not fly-blown. On picking it up I was delighted to find B.B. ring No. 34202 upon its leg, showing that I marked it there, and in that end of the colony, as a chick on July 14th, 1916. This is, I believe, the first and only record of a British Lesser Black-backed Gull being found dead in its parent gullery. H. W. ROBINSON.

QUAIL IN CAMBRIDGESHIRE.

DURING the last eight years I have only three times noticed the Quail (*Coturnix c. coturnix*) near Cambridge. In 1916 I heard and saw a bird in a lucerne field beside the Fleam Dyke; and in 1918 or 1919 I heard the call-note in a clover field on the Gog Magogs. Each ensuing summer I searched this bit of country without success; but on August 9th of this year I heard a Quail calling in a weed-grown fallow field on the chalk ridge not far from Newmarket. This field was only about $1\frac{1}{2}$ acres in extent and surrounded by miles of cornfields in which, so far as I was able to search them, no other examples were to be heard. This predilection for leguminous or weed crops on the chalk may perhaps account for the scarcity and irregularity of the Quails' occurrence round Cambridge, where the higher ground is mostly cornland. MAUD D. BRINDLEY.

RARE BIRDS ON FAIR ISLE.—Surgeon Rear-Admiral J. H. Stenhouse, who paid a visit to Fair Isle from September 6th to October 4th, 1923, records (*Scot. Nat.*, 1923, p. 173) having observed two adult Norwegian Bluethroats (*Luscinia s. gaetkei*), at least seven Blue-headed Wagtails (*Motacilla f. flava*), five Yellow-browed Warblers (*Phylloscopus h. præmium*) and a Grasshopper-Warbler (*Locustella n. naevia*). In the same journal (1924, p. 4) it is recorded that an adult male Coues's Redpoll (*Carduelis h. exilipes*) was obtained on the island on October 22nd, 1923.

ALBINO CARRION-CROW IN WESTMORLAND.—Mr. L. E. Hope informs us that on May 3rd, 1924, an albino Carrion-Crow (*Corvus c. corone*) was caught in a rabbit trap near Appleby and was sent to the Carlisle Museum. Mr. Hope states that in general coloration the bird is a rich cream, the plumage much worn and moulting had commenced, two half-grown primaries being in each wing. The legs were pale grey, the beak grey, darker at the tip, iris pale blue.

ROOSTING HABITS OF ROOKS.—Attention may be drawn to two interesting papers on this subject in *The Scottish Naturalist*, the one referring to Bute by the Rev. J. M. McWilliam (1924, pp. 5-7) and the other to Lanarkshire by Mr. W. Stewart (1924, pp. 69-74).

WOOD-LARK IN FIFESHIRE.—The Misses L. J. Rintoul and E. V. Baxter record (*Scot. Nat.*, 1924, p. 75) that they identified a Wood-Lark (*Lullula arborea*) at Balcomie on April 7th, 1924. The bird has not previously been recorded from the mainland of Scotland.

WHITE WAGTAIL AND PIED FLYCATCHER IN NORFOLK.—Mr. N. Tracy informs us that on April 18th, 1924, he identified a *Motacilla alba alba* on a heath near South Wooton, and on May 11th in a wood near the same place he had a male *Muscicapa h. hypoleuca* under observation for three-quarters of an hour. Both appear to have been passing migrants as neither were seen again.

SIBERIAN LESSER WHITETHROAT ON FAIR ISLE.—Besides the two occurrences of *Sylvia curruca affinis*, included in the "additions" in the *Practical Handbook*, a third example is now recorded by Dr. Clarke and Admiral Stenhouse (*Scot. Nat.*, 1924, p. 4) as having been obtained on Fair Isle by Mr. J. Wilson on October 16th, 1923.

BLACK REDSTART IN MIDLOTHIAN.—Two Black Redstarts (*Phœnicurus o. gibraltariensis*) were seen by Colonel D. A. Wauchope in the Royal Botanic Garden, Edinburgh, on May 1st, 1924 (*Scot. Nat.*, 1924, p. 76). One, a male, he watched for several minutes at a distance of a few feet. The bird has seldom been recorded from the mainland of Scotland.

ALPINE SWIFT IN DEVONSHIRE.—Mr. C. R. H. Edwards states (*Field*, 8.v.1924, p. 636) that he shot an Alpine Swift (*Apus melba*) on April 14th, 1924, at Start Point.

ALPINE SWIFTS SEEN IN WIGTOWNSHIRE.—The Duchess of Bedford records (*Scot. Nat.*, 1924, p. 84) that a "small party" of Alpine Swifts (*Apus melba*) appeared about the middle of September, 1923, at Corsewall Lighthouse, Stranraer. The birds stayed for several days and were many times seen about the buildings by the lightkeeper and his wife who, we are informed by the Duchess, are well known to her as reliable observers and know Common Swifts perfectly.

GREAT SPOTTED CUCKOO REPORTED FROM CO. KERRY.—Prof. L. P. W. Renouf of the University College, Cork, records (*Irish Nat.*, 1924, p. 30) that he has received from Mr. Charles

O'Driscoll the "remains" of a Great Spotted Cuckoo (*Clamator glandarius*) which was found dead during February, 1918, near Caherciveen. The bird was said to have been accompanied by another for about a week. At the same time a Hoopoe (*Upupa epops*) was in a neighbouring field for a week, after which it was shot, while seven other Hoopoes were in the neighbourhood. The Editors append some further particulars from which it would appear that Mr. O'Driscoll had the Hoopoe mounted and that Messrs. Williams of Dublin state that this bird was received by them on April 10th, 1918. It would therefore seem that the date of the appearance of the Cuckoo was about the end of March, a much more likely date than February. It was not realized that the Cuckoo was a rare bird and it was not sent to be preserved, but the "remains" have been examined by the editors of the *Irish Naturalist* who state that they are undoubtedly those of a Great Spotted Cuckoo. The bird has twice previously been recorded from Ireland, once from Kerry and once from Connemara.

LITTLE OWL IN CUMBERLAND.—Mr. H. C. Gandy reports (*Field*, 5.vi.1924, p. 793) that a Little Owl (*Athene noctua*) was caught near Cumwhinton in a rabbit trap in February, 1924. The specimen has been preserved by Mr. L. E. Hope of the Carlisle Museum.

LITTLE OWL IN BERWICKSHIRE.—Mr. J. P. F. Bell records (*Scot. Nat.*, 1924, p. 76) that a Little Owl (*Athene noctua*) was caught in a trap in a rabbit-burrow on Lamberton Moor on April 4th, 1924. The bird has been presented to the Royal Scottish Museum. In recent years single birds have been recorded from Fife (1910), Roxburgh (1921) and Northumberland (1919).

ROUGH-LEGGED BUZZARD IN CO. WICKLOW.—A Rough-legged Buzzard (*Buteo lagopus*), an uncommon visitor to Ireland, was caught in a trap at Ballinrush, near Lough Dan, in the second week of December (1923) and has been sent to the Dublin Zoological Gardens (*Irish Nat.*, 1924, p. 31).

SPOONBILL IN YORKSHIRE.—Mr. F. Snowdon records (*Nat.*, 1924, p. 253) that an immature example of *Platalea l. leucorodia*, in an emaciated condition, was found dead on the beach at Saltwich, near Whitby, on July 3rd, 1924.

SPOONBILL IN CO. KERRY.—Prof. L. P. W. Renouf records (*Irish Nat.*, 1924, p. 30) that a Spoonbill (*Platalea leucorodia*) was shot on September 29th (? 1923) on the Valencia Estuary.

GLOSSY IBIS IN CORK.—Mr. J. W. Brasier-Creagh reports (*Field*, 13.iii.1924, p. 346) that a Glossy Ibis (*Plegadis falcinellus*) was shot on February 20th, 1924, near Churchtown, co. Cork, and sent to Messrs. Williams of Dublin for preservation.

SNOW-GOOSE IN OUTER HEBRIDES.—Dr. W. Eagle Clarke records (*Scot. Nat.*, 1924, p. 9) the occurrence of an example of *Anser hyperboreus hyperboreus*, which was obtained on Barra on October 9th, 1917, by Mr. W. L. MacGillivray and is now in the Royal Scottish Museum. As Dr. Clarke quite rightly points out the specimen obtained in the Solway in 1884 (not 1854 as printed in the *Practical Handbook*, Vol. II., p. 249) was not preserved and not examined by an ornithologist and may have been a Greater Snow-Goose (*A. h. nivalis*). The Barra specimen is therefore the first authenticated specimen for Scotland of the smaller form.

PRATINCOLE RECORDED AS SEEN IN MORAYSHIRE.—Major A. Stables states (*Scot. Nat.*, 1924, p. 8) that on August 17th, 1923, he watched for about an hour at Loch Spynie a bird which he identified as a Pratincole. Beyond the statement that he "suddenly saw what seemed to be a giant swallow of sorts, which when it got within range I saw was a Pratincole," the record does not give any evidence for the correctness of the identification, nor does he state if he was familiar with the species. He adds, however, that as the bird never flew "directly overhead" he could not see the under wing-coverts; but it is not necessary for the bird to fly directly overhead to enable one to see the under-wing.

THE SPREAD AND DISTRIBUTION OF THE WOODCOCK AS A BREEDING BIRD IN SCOTLAND.—Under this title the Misses E. V. Baxter and L. J. Rintoul contribute a valuable paper to the *Scottish Naturalist* (1923, pp. 177-183; 1924, pp. 13-40 and 47-51). This consists of a General Introduction, a Chronological List of Records and a List of Works referred to, while the detailed facts which form the bulk of the paper are given under counties and faunal areas. The paper itself should be consulted, but it may be remarked that the authors consider that the increase and spread of the Woodcock (*Scolopax rusticola*) as a breeding species in Scotland has been due to the provision of more suitable nesting sites, by the much greater extent of plantations since the beginning of the nineteenth century, and to the protection of the bird in the spring.

GREAT SNIPE IN SHETLAND.—Mr. A. J. Nicolson records that a Great Snipe (*Capella media*) was shot in Fetlar on September 20th, 1923, and has been sent to the Royal Scottish Museum.

GLAUCOUS GULLS IN THE ISLANDS OF SCILLY.—CORRECTION.—Mr. H. M. Wallis writes that the date upon which he saw the three Glaucous Gulls on Tresco Pool was May 28th, 1924, and not June 1st, as stated *antea*, p. 73.

LETTERS.

CHAFFINCH NESTING ON THE GROUND.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to Mrs. Taylor's note (*antea*, p. 74), I once found the nest of a Chaffinch (*Fringilla c. cælebs*) built on the ground at the foot of a hazel bush at Wilsden. There was no lack of more suitable nesting places in the immediate neighbourhood of this nest.

E. P. BUTTERFIELD.

ABERRANT SONG OF CHIFFCHAFF.

To the Editors of BRITISH BIRDS.

SIRS,—On June 15th, 1924, near Cumdivock, Cumberland, I listened to a Chiffchaff (*Phylloscopus c. collybita*) singing, and after uttering its own song the bird ended with a portion of the Willow-Warbler's song. This performance was repeated several times, and then the Chiffchaff devoted itself exclusively to its own song. This is an interesting confirmation of the aberrant song of this species as already noticed by Messrs. C. W. Colthrup and B. Lloyd (Vol. XVI., pp. 134, 161, 227).

R. H. BROWN.

SONG-THRUSH AND OTHER BIRDS IMITATING WADERS.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to the letters under the above heading (*antea*, p. 88), I have, on several occasions this year, heard a Song-Thrush in my garden incorporating the call of the Curlew into its song. The imitation was remarkable for its accuracy, but the notes were much weaker than those of the Curlew, and it was this which led me to investigate and to discover that it was a Song-Thrush which was producing them. Sometimes I heard just the call of the Curlew repeated once or twice only, at others the call of the Curlew preceded and concluded by the ordinary notes of the Thrush without any break.

LOXBEARE, TIVERTON, DEVON.

STANLEY PERSHOUSE.

To the Editors of BRITISH BIRDS.

SIRS,—On several occasions I have heard a Song-Thrush using the call-note of the Redshank in its song, and first find this mentioned in my notes for March, 1918. I have no note of the Song-Thrush imitating the Curlew, but have heard Starlings using the rippling note of the latter.

I can also corroborate Mrs. Audrey Gordon's statement that Skylarks will include the alarm-note of the Dunlin in their songs.

R. H. BROWN.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. C. I. Evans's note (*antea*, p. 62), it may be of interest to record that in June of this year (1924), at Mickle Trafford, near Chester, there was a Song-Thrush in the garden which was continually imitating the Redshank which were breeding not far away and could be heard from the garden. The imitation was so good that, at first, I thought the notes were made by the Redshank.

HILDA TERRAS.

THE NORMAL CLUTCH OF SANDWICH TERN'S EGGS.

To the Editors of BRITISH BIRDS.

SIRS,—I agree with Mr. Borrer that a *genuine* clutch of three eggs of the Sandwich Tern (*Sterna s. sandvicensis*) is an extreme rarity; I have never seen one. Many people know the Drigg Colony better than I do, but during three visits there I have never seen a clutch of three eggs. But in a colony in the Orkneys that I know extremely well one egg is as common as two eggs. I should like to correct a statement in *A Hand-List of British Birds*, on page 193, where in a note I am quoted as saying that this bird breeds on Sanday and not North Ronaldshay; the facts are that it varies from island to island, and this, as far as I can judge, depends on whether it is badly "harried" or not. Generally speaking, every egg of every bird is systematically taken by children and the contents broken into skim milk and given to calves. On several occasions I have met children with a bucket full of eggs, amongst them being Sandwich Terns, Red-necked Phalaropes and various Gulls and Ducks.

JAMES R. HALE.

August 8th, 1924.

In Mr. O. A. J. Lee's work on *British Birds in their Nesting Haunts* there is a beautiful photograph of a clutch of three eggs of the Sandwich Tern taken on the Farnes on May 10th, 1893 (Vol. I., p. 72). This author states that there were over 200 nests that year on an islet joined to the inner Wide-opens at low water and that the eggs were usually three in number and one nest was seen with four eggs in it. In 1918, on the other hand, I did not see a single set of three out of some hundreds examined, although they undoubtedly occur there.

F. C. R. JOURDAIN.

REVIEWS.

Systema Avium Ethiopicarum. A Systematic List of the Birds of the Ethiopian Region. By William Lutley Sclater, M.A., M.B.O.U. (Prepared in conjunction with special committees of the British and American Ornithologists' Unions.) Part I. Published by the British Ornithologists' Union and sold by Wheldon & Wesley Ltd.

THIS work is the forerunner of an important series of lists of the birds of each zoogeographical region which it has been agreed shall be undertaken jointly by the British and American Ornithologists' Unions. The former is to be responsible for the birds of the Old World and the latter for those of the New World. This volume forms part 1. of the list of birds of the Ethiopian region and covers all the orders except

the Passeres. Although the compilation of the list is the work of Mr. W. L. Sclater, the MS. and proofs have been approved by the special committees appointed for the purpose by each Union and the work thus has wide authority. It is hoped that the lists prepared under these committees will form a sure basis for a stabilized nomenclature. Systematic writers should certainly use the names adopted in these lists so far as purely nomenclatural questions are concerned, though what species should be grouped under what genera and what subspecies should be accepted, and taxonomic questions of a like nature, must of course be open for discussion for many years to come.

Mr. Sclater defines the Ethiopian region as embracing that portion of Africa and the Arabian Peninsula lying south of the tropic of Cancer, and he includes a number of islands. Original references are given for both generic, specific and subspecific names, the method of fixing the type of the genus is explained and the type locality of the species or subspecies is stated. An English name is also given for each bird and its distribution is defined.

In considering the list from the standpoint of British birds it is interesting to note how many there are common to both lists; but of all those in the present volume there are very few which breed both in the British Islands and also in the Ethiopian region. The Common Heron and the Kentish Plover are perhaps the only certain ones; the Osprey might also be included did it still breed in the British Isles; the Shoveler and the Tufted Duck are said to breed in Abyssinia, but Mr. Sclater evidently does not regard this as proved; the Land-Rail "perhaps sometimes breeding" is another doubtful case; the Little Tern which breeds on the west coast is thought probably to belong to a distinct race, as is the common Bee-Eater which has been recorded as occasionally nesting in South Africa.

The Biology of Birds. By J. Arthur Thomson, M.A., LL.D., Professor of Natural History in the University of Aberdeen. Pp. xi.-436, with text illustrations and nine half-tone plates. (Sidgwick & Jackson.) 16s. net.

PROFESSOR THOMSON has produced many delightful works, and to these the present work—thorough, informative and entertaining—is a notable addition. The book, the general production of which leaves nothing to be desired, deals with birds from the viewpoint of the general biologist. The why and the wherefore of migration, sexual display, structure, egg coloration, etc.; the evolution and pedigree of birds; the origin and mechanism of flight; birds and adaptation; birds as a sector in the web of life—these are the sort of lines along which our author leads us. He is for the moment a lecturer on biology whose illustrations are drawn entirely from the realms of ornithology. The treatment is not new, but the rate of scientific progress is such that an up-to-date work of the kind was needed.

The interest of the book is enhanced by the fact that the author eschews dogmatism. He considers every question from all aspects and gives every party a fair hearing. This manner of handling the subject is productive of surprises. The chapter on migration is, for instance, with the exception of the short introductory one, the briefest in the volume. Yet there are very few birds, perhaps none at all, that do not show the migratory impulse at some time or another. It is one of the most universal of avian characteristics. It has been noticed and commented on from the days of Aristotle. But so little is it understood that a comprehensive presentation of its various

aspects is achieved in fifteen pages. Biologically speaking, migration remains a mystery.

It seems to me that there exists a reason for such an unfortunate state of affairs and it is emphasized in another, and very useful, section of the book, the bibliography. In the nine pages of "books and papers referred to in the text" one looks almost in vain for the familiar names of well-known ornithologists. True, there are some, but the vast majority are those of eminent zoologists, physiologists, anatomists, and even palæontologists. It seems almost incredible that an excellent bird book could be produced with such scanty reference to bird men, but it serves to accentuate the chasm that exists between ornithologists and biologists. Biology implies the study of the *Bios* of the bird, and no amount of specialized knowledge on the third cœcum or vitelline capsules can altogether atone for its absence. As one turns over the pages of this work, the eye is caught by one statement after another which betrays a lack of acquaintance with the living bird. Matthew Arnold's "beautiful suggestion of the social stimulus" causing a captive Stork to utter "a long complaining cry" at the sight of its relatives on migration (p. 170) has no doubt a substratum of truth in it, but the stimulus would not be manifested by a physical impossibility. If Hitzheimer really found the male Goshawks considerably larger than the females as stated on p. 209, we can only state that his experience differs from that of all other ornithologists. Norfolk naturalists will be surprised to learn that the Bittern is no longer a breeding bird in Britain (p. 157). Is it local patriotism which leads Professor Thomson to speak of the Red Grouse as having been introduced elsewhere "as on upland heaths in the north of England, on many Welsh moors and on many Irish hills," although it is indigenous in all three countries? (p. 154.) On the same page we find the surprising assertion that the Kittiwake remains at the sea cliffs throughout the year! We think few field ornithologists would class the Cormorants among birds "which only enter the water occasionally." (p. 148.) To class the Alpine Swift as a "mountain bird" in the sense that the Ptarmigan and Snow Finch are mountain dwellers is also quite misleading, and we should be interested to learn details of the "noble Falcon" whose eyry is typically on a cliff, but which may nest occasionally in a marsh (p. 295). Fantail Warblers do not sew leaves together to make their nests, still less do they knot the thread with which they sew (p. 295). Fortunately there is a tendency, very strongly marked at the present time, for the trained scientist to take more interest in the great problems of the field and for the bird student to become more enquiring into the scientific reason of things. When amalgamation of interests has taken place we can surely expect an increased knowledge on such an absorbing topic as migration.

The Biology of Birds should be read—and it will inevitably be enjoyed—by every ornithologist, for it will reveal those problems and points of view that attract the attention of the trained laboratory scientist. To the latter, to whom we can commend the volume no less heartily, it will demonstrate the wealth of research material that birds have to offer, material that has been casually turned over from time to time, but has never been submitted to scientific analysis. Co-operation and mutual understanding are more needed to-day in the study of bird-life than in probably any other branch of science. Professor Thomson's book cannot fail to go a long way towards stimulating such co-operation.



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FIELD-NOTES ON THE MAGPIE, AS OBSERVED IN CUMBERLAND.

BY

R. H. BROWN.

COURTSHIP.—On a few occasions I have seen the courtship of the Carrion-Crow (*Corvus c. corone*) and the Rook (*C. f. frugilegus*) and with both species the displays were similar. The sexes were recognized by their behaviour. The male approached the female and, with outspread wings and tail, bowed to her, at times almost touching the ground or tree branch (according to where the courtship was being conducted) with his bill, whilst at intervals a "Caw, caw" was uttered. I have never seen the Magpie (*Pica p. pica*) displaying in this way, but during the early part of 1924 the following displays were noted which evidently have some connexion with courtship. The first display was seen on February 16th, a warm, sunny day, but lost some of its value through my inability to recognize the sexes, though perhaps the birds which indulged in flights were males. There were seven Magpies in the top branches of a tree, chattering a good deal and pursuing one another about the branches. Now and again a bird would give expression to some musical-sounding notes like "Chōōk, chōōk," and as well as one could judge these notes were uttered by either sex. Also, fairly frequently, but always separately, three Magpies (males?) would fly from the tree, perform a short flight, and then return to the same branch whence they started. Only these three birds indulged in flights, each one usually flying the same distance each time, and whilst one was performing a flight the others kept chattering, pursuing each other, and uttering their "Chōōk, chōōk." The flights were generally carried out in silence and in the case of one bird the flight was twice as long as that of the others, wavering for some time before it turned and went back. Once two Magpies were seen fighting, using their feet, but the fight lasted only for a minute. After half an hour of this display the birds flew away, one by itself, the rest in pairs.

On March 11th, another sunny day, five Magpies flew into a holly bush in a neighbouring field. They began to pursue each other about the branches, chattering the while, and sometimes uttering their "Chōōk, chōōk" notes. Two birds indulged in flights, and the five performed as already described. After about twenty minutes of this the birds

separated, one going by itself, the others in pairs. Five minutes later they returned, performed as described for ten minutes, and then departed as before.

On the evening of March 12th my attention was attracted by the chattering and "chōōk" notes of Magpies in a hawthorn bush, and going towards the bush I found six in it, all engaged in a general *mêlée*, but my approach frightened the birds away.

The last display was noted on the evening of March 29th, when four Magpies were seen in a fir tree, performing as described above. However, in the early morning of April 17th I noticed four others pursuing one another about the branches of a tree, but as none of them either indulged in flights or uttered the "chōōk" notes, it is probable they were paired.

NEST BUILDING.—The Magpie shows a decided preference for the same nesting locality year after year, so that sometimes the same tree is used for several years in succession, and occasionally one finds a nest built upon the remains of those of one or two previous years. Some pairs begin nest building in March, from the second week onwards, but usually April has arrived before the majority commence their nests. With the early nests there is often a considerable interval—as long as three weeks—between the completion of the nest and the laying of the first egg. The first nests built are usually very solid—and conspicuous—structures, built in about three weeks, the nest proper taking about two weeks, the lining another week. Both sexes assist in the work of building the nest, which is constructed of sticks and earth, moulded into a cup shape and overlaid with earth, then covered with a dome of sticks, an opening being left in the dome for entrance and exit. The dome-opening is often situated on the least accessible side of the tree, whilst occasionally there are two openings. The cup is then usually lined with fibrous roots, the thicker roots next the earth, the finer roots for the eggs to lie on. I have not as yet been able to ascertain whether the lining of the nest is the work of one sex or both. On visiting nests early in a morning I have found moist earth adhering to the roots, suggesting that the Magpie collects live roots for the nest lining.

Individual Magpies have their own peculiarities, and hence all nests are not lined with fibrous roots. Some birds use binder-twine only, others a mixture of horsehair and roots, or hair, roots, and twine, whilst I have twice found a nest

lined entirely with horsehair and have also noted paper in the lining. One nest built in a sycamore tree was lined entirely with oak leaves. However, these are just individual eccentricities, the usual lining being fibrous roots.

The dome is generally built of thorny sticks, but one may find domes built entirely of non-thorny sticks or else of a mixture of thorny and non-thorny material and, if possible, the birds entwine the branches of the nest-tree into the dome. I have found nests in hawthorns covered with domes of non-thorny sticks and nests in fir trees whose domes were made of thorny sticks and *vice versa*.

Most nests are built either in hawthorn bushes or else in Scotch pines or larches, and it is noticeable that the nest is built, if possible, on two or three branches. When situated in a hawthorn or fir tree it is usually in the topmost branches, but occasionally a pair will nest in a hawthorn hedge, and on these occasions it may be found in the middle of the bush, indeed, not more than four feet from the ground. Also, if allowed, the birds are fond of nesting in a hedge beside a poultry-run or a clump of trees surrounding a farmhouse. Besides the Scotch fir and larch other trees utilized are the oak, ash, sycamore, and alder.

If the first laying of eggs is taken or destroyed, another nest is built and a second clutch laid, but if this clutch is destroyed the birds do not lay again that season. The second nest is usually not so well built as the first, and is often found within fifty yards of the first. A second laying may be looked for about a month after the first has been taken.

LAYING AND INCUBATION.—The clutch varies from three to eight eggs, but the latter I have only found once and, curiously, all the eggs were infertile. Nests with three and four eggs are genuine first clutches as I have found by visiting the nests daily during the laying-period. One egg is laid each day, the female covering the eggs at night. In 1924 ten nests were visited daily during the laying-period to discover when incubation commenced, and it was found that with a clutch of three or four eggs incubation did not commence until the full clutch was laid, but with a larger clutch incubation usually commenced after the fourth or fifth egg. I have never watched a nest to see whether both sexes assist in incubation, but from the behaviour of the bird when put off the eggs I judge that the female alone incubates. Thus on putting a Magpie off a clutch of eggs it flies away quietly, but if its mate is near, which often is

the case, the latter starts chattering, and the noisier bird I take to be the male. Also if one visits the nest before incubation has started and both birds are near it, one will invariably chatter as long as anyone remains in the vicinity, but the other bird is often silent.

If an egg does not hatch it is left in the nest. Full clutches are not usually found here until the third or fourth week in April, but as the birds will lay again if robbed, fresh eggs may be found until the first or second week of June. The average incubation-period is seventeen to eighteen days, and the fledging-period twenty-four to twenty-seven days.

Nest.	Clutch.	First Egg.	Last Egg.	Hatched	Incubation Period.	Number of Young Reared.	Left the Nest.	Fledging Period.
					Days.			Days.
1	7	April 17	April 23	May 10	17	5	June 5	26
2	3	April 7	April 9	April 27	18	1	May 21	24
3	7	May 7	May 13	May 30	17	4	June 23	24
4	6	May 22	May 27	June 14	18	5	July 11	27
5	6	May 26	May 31	June 18	18	5	July 12	24

In the above cases, all the eggs proved fertile.

THE YOUNG.—The nestlings have flesh-coloured skins, free of any down, their mouths coloured inside deep flesh-colour, the external flanges pinkish-flesh. The skins rapidly assume a yellow tinge and when the nestlings begin to fledge, a greyish tinge. The coloration of the mouth inside changes first to pink, then to a deeper pink, and finally to purple, but the young may have left the nest before this final phase of mouth coloration is assumed. The nestlings are blind until seven or eight days old. When fledged the young have the iris pale grey. When they leave the nest their tails are not more than five inches long and they skulk about the undergrowth, fed by their parents, and doing little flying until their tails are full grown.

I have never known all the young to be reared, and usually one nestling, sometimes two or three, disappear. The figures in the above table are typical of the number of young reared in proportion to those hatched. Five young reared out of six hatched is a good average and one has known only two to be reared out of five hatched and four out of seven. Food probably plays an important part in the matter as most Magpies appear to collect all their food within a half-mile radius of the nesting-site, and with a large family to support, no doubt the supply is not always equal to the

demand, and the last-born nestlings die of starvation or are killed by their stronger brethren. I am convinced they do not fall out of the nest, for occasionally a fledged youngster is found dead at the base of a nest-tree, but never, in my experience, an unfledged one. Besides, the shape of the nest is against a nestling falling out.

FEEDING OF THE YOUNG.—All the data with regard to the brooding and feeding of the young was obtained from two nests watched during 1924. The young are brooded during the day until they are ten or eleven days old. Both sexes assisted in feeding, often arriving at the nest together. Magpies usually adopt a circuitous route in visiting the nest and on reaching the nest-tree are greeted by the chirping of their family, which is kept up until the adults have left. Occasionally also an adult was heard to utter a crooning-like noise whilst feeding the young. No fæces were ever seen to be carried away, but the insides of the nests are always kept clean, so presumably the fæces are swallowed by the adults or else dropped outside the nest, as the branches below are sometimes very much splashed. No food could be detected in the adults' beaks when they arrived at the nest.

Nest 1. Four young, seven days old. Fed five times in three hours. (2-5 p.m.)

Nest 1.—Four young, twelve days old. Fed three times in two hours. (7-9 p.m.)

Nest 2.—Five young, nine days old. Fed four times in two hours. (9.30-11.30 a.m.)

Nest 2.—Five young, seventeen days old. Fed twelve times in two hours. (1.15-3.15 p.m.)

As the nestlings become fledged they are apt to be noisy, and the nest may be found by hearing the young calling out for food. Also on being handled they are usually very noisy. Their chattering will often bring the adults into the nest-tree. After leaving the nest the young remain with their parents some time and then appear to be driven away, as during July and August one sees fighting occurring amongst undoubted family parties.

FLOCKING AND ROOSTING HABITS.—During the winter months the Magpie is partly gregarious and in places where they are not molested parties of fifteen to twenty can be seen during the daytime. In these same localities, however, odd pairs are to be seen, so possibly the small flocks may consist of unmated birds. With the approach of night all

the Magpies in a neighbourhood flock together and roost in some favourite locality, often a fir wood or tall hedgerow. I note that dusk has usually fallen before the birds, with much chattering, go to roost, and indeed, with the exception of the Carrion-Crow, the Magpie must be the last bird to go to roost. This roosting habit lasts into the month of April, when they commence building, and during that work some pairs roost in their nest-trees at night, but when the female has begun to lay the male evidently roosts elsewhere. If two or three pairs in the same neighbourhood are robbed of their first clutches the birds will flock again for a few days, until they begin their second nests.

FEEDING HABITS.—In the early autumn months the Magpie may be seen perched on the back of a sheep, searching its fleece for insects. Outside the autumn months I have only one record of a Magpie on a sheep's back, in early March. Throughout the winter the birds are often noticed overturning the droppings of beasts in order to get any concealed insects. With the advent of spring and cultural operations on the land attention is paid to the newly-sown cornfields, but the birds appear to visit these fields more when the corn is two or three inches high. It is during the spring and early summer that the Magpie commits most damage, as it takes any eggs it can find. When a nest is found, generally both Magpies will visit it, and usually one bird keeps guard whilst the other robs the nest. In my experience the egg or eggs (as occasionally two eggs are carried at once) are taken away in the beak, laid on the ground, broken, and eaten. I have never seen a Magpie take a young bird, but have no doubt it will occasionally do so, especially if it has young to feed. Thus one day I noticed a pair of Starlings driving a Magpie away from their nest, which was situated in the roof of a deserted house and contained partly fledged young. The following day the young had disappeared. Another time a pair of Willow-Warblers were observed attempting to drive a Magpie away from their nest of young, flying at it and striking it with their wings. In both these cases the Magpies had nests of young. On a third occasion I had concealed myself near a Kingfisher's nest. Hardly was I hidden before a Magpie flew down to a branch beside the tunnel and craned its neck up the tunnel as if wondering whether it could reach the young, but eventually it flew away.

However, the Magpie is liable to have its eggs taken by other birds, the principal thief being the Carrion-Crow, and

they will always attack any Crows that venture too near their nests. These are not the only occasions when Magpies will attack Crows, as I have known a pair dispute with a pair of Carrion-Crows the possession of a clump of fir trees, evidently desired by both species for breeding purposes. Except in the case of the Carrion-Crow it is rarely that the Magpie will show fight, usually contenting itself with chattering loudly at any enemies. One morning my brother and I visited a Magpie's nest in a Scotch pine and as we approached the nest heard the chattering of Magpies. Just as the nest-tree was reached we saw a squirrel make its way out of the nest closely pursued by the two birds, chattering loudly but not attacking it. On climbing up to the nest I found one egg broken and a number of Magpie's feathers sticking to the inside of the nest-dome, suggesting that the squirrel had surprised the Magpie whilst brooding the eggs.

When feeding, Magpies usually keep by themselves, and if in a large flock, one or two birds are often posted as outlook in some hedge or tree. Occasionally one or two may be seen feeding with a flock of Rooks, but generally the latter drive them away.

Although the Magpie is a conspicuous bird its habitual caution, and the close resemblance between the sexes, render the task of observation by no means an easy one.

SOME FURTHER NOTES ON THE COURTSHIP BEHAVIOUR OF THE GREAT CRESTED GREBE.*

BY

J. S. HUXLEY, M.A.

HAVING previously watched in some detail the Great Crested Grebe's (*Podiceps c. cristatus*) post-mating courtship (Huxley, '14)†, I was anxious to discover more about the earliest stages of its annual history, about which, as I had previously ascertained, hardly anything was to be found in the literature.

A number of pairs of Grebes nest on the lake at Blenheim, about eight miles from Oxford, and it was there that the following observations were made. I wish here to acknowledge my indebtedness to various members of the Oxford Ornithological Society who took up my suggestion of watching, and notably Messrs. Banks, de Beer and Tucker.

SEASON 1922-1923.

The Great Crested Grebe appears to differ in different localities in its winter behaviour. Blenheim is one of the places which it deserts altogether in winter. No Grebes were seen from the first visit paid on November 8th, 1922, to the end of January, 1923. At the end of the first week of February two birds were noted, then three a day or so later, two again on February 17th, four on February 23rd. (It is, of course, possible on a large sheet of water, really making two considerable lakes joined by a strait, to miss one or two birds; but experience showed that with a little trouble the error is always small.)

By February 28th there were eight birds. By March 3rd there were fourteen or fifteen birds, and finally on April 1st there were twenty-four or twenty-five birds. Thus migration is spread over a long period.

Up to and including February 17th, no sexual activity of any sort was noted. No courtship proper (mutual head-shaking ceremony) occurred before February 28th; but on February 17th the two birds, when within sight of each other, frequently went into the typical attitude of hostility, which is also similar to that of search for a mate (neck right down and forward, ruff in curtain form brushing the water, and special cry), although at some distance from each other throughout. On February 28th two pairs indulged in the

* Contributions from the Oxford Ornithological Society, No. 1.

† Huxley, J. S., *Proc. Zool. Soc.*, 1914.

head-shaking courtship. The other four definitely appeared to be unpaired, three of them repeatedly going into the hostility attitude.

On March 3rd again only two pairs indulged in courtship, one repeatedly at intervals for over one and a half hours. Besides this, there were obviously three, and possibly four, other pairs, leaving four to five, or two to three, unpaired birds. At least two of these unpaired birds were repeatedly going into the "hostile" attitude. When near a pair the attitude was exaggerated, and was answered by the *male* of the pair going into a similar attitude (*cf.* Huxley, '14).

One of the pairs which had been head-shaking later added weed to an already half-built nest or pairing-platform. The early date of this is of interest. Details are appended below.

On April 1st I did not have time to go carefully into the question of how many birds were paired. Most birds, however, seemed to be so, and were to be seen close together on open water. In spite of its being a fine day, considerably less courtship was seen than on March 3rd.

The solitary birds which were seen on and after February 17th in the hostile attitude all appeared to be males, judging by the size of their crests. This, however, is not a certain criterion unless both birds of a pair can be seen together, so I will content myself by saying that most of them were probably males.

It thus appears probable that only males were present on February 17th, and that the proportion of females to the whole number gradually increased as time went on. This would imply that the males which are unmated probably arrive on the breeding grounds before the unmated females. It gives no information as to the behaviour of pairs which were mated in previous seasons.

The behaviour of the building pair on March 3rd was of considerable interest. Both were busily engaged in picking small pieces of weed from the surface and depositing them on the nest, which had now reached about an inch above the surface. After a time, the female laid her neck flat on the nest, her body being still in the water. Unfortunately, I could not make out what the male was doing, as he was hidden by branches. After this both birds dived several times, coming up with large bunches of weed which they laid on the nest. Then the hen got out on to the nest and assumed a remarkable attitude, the body slightly inclined forward, the neck, with a slight curve in it, sloped downward at an angle of about 30°. There was a curious rigid look about

the bird, which was accentuated by the fact of her remaining motionless in this position for several seconds. She then sank down on to the nest, into what would have been the normal female coition-attitude, except that the neck was raised a trifle from the horizontal. She remained thus for a good half-minute. The male approached the nest, but soon departed again. The female then raised herself into the same rigid standing position for some seconds, and a second time sank down from this into the coition-attitude. Again the male took no particular notice. The female then got off the nest and both went off on to open water.

Several points in connection with this incident are of interest: (1) Probably the structure was a pairing-platform and not a true nest. In any case, eggs are not normally due to be laid by the Grebe until late April, so that either the pairing-platform is built some time before it is used, in which case its building could properly be looked upon as a mutual "courtship" ceremony, like the head-shaking which also starts as soon as the birds are on the breeding-grounds and in pairs, or else, unlike the Buntings and presumably most Passerine birds, the female Grebe desires and permits coition before ovulation is possible.

(2) The rigid pose on the nest is similar to the pose noted by Selous on the nest later in the season as a preparatory to coition.

Other points. Whenever a solitary bird in the search (hostility) pose passed near a mated pair, it was the *male* of the pair which went into the hostility attitude. This confirms my belief that the solitary birds were males (see Huxley, '14).

1923-1924.

October 14th, 1923.—A short bout of head-shaking. This is very late in the season.

October 25th, 1923.—Six Grebes present. November 4th, two. November 10th, one.

November 24th.—Three Grebes, although much of lake frozen. December 1st, no Grebes.

January 20th, 1924.—No Grebes. January 26th, one.

February 7th, two Grebes; clearly not a pair. Once they followed each other. Search attitude and call at intervals. February 15th, three Grebes.

February 17th.—Three Grebes, all far apart. One went about for some time in the search or hostility attitude.

March 2nd.—Five Grebes. Two of these clearly a pair. Two short bouts of shaking, followed by diving for weed and

a short "penguin-dance" (Huxley, '14), which itself passed immediately into a short bout of shaking. This is the earliest record I have of this type of ceremony.

March 6th.—Nine Grebes. One pair (A) had a short bout of shaking. Then visited a reed-bed; the female entered, but the male stayed near the outside. A second pair (B). Four bouts of head-shaking seen, two very long. During the end of the last the male continued the typical shaking, while the female looked in one direction all the time. (This is the first record I have of one bird ceasing to shake while the other continues.) A third pair (C). A single male bird was seen croaking repeatedly (search call). A female separated from a group of three some distance away. The two approached each other, both with outstretched necks. Suddenly the female assumed a splendid "cat-attitude" (Huxley '14) with wings outspread and ruff erected. The male dived; rose upright from the water close in front of his mate; held himself in this position for a few seconds, then settled down, and both birds indulged in a bout of shaking. During the bout the male put his head right back until the beak was pointing straight up; then shook, and then straightened his neck. This action was repeated throughout. The female performed thus during the latter part of the bout, normally during the early part. Later, the male approached the female of a fourth pair (D), but she swam off and was not pursued. He then turned and swam back in the search attitude towards his own mate. She took no notice. Later they had a second bout, partly of normal head-shaking, partly with beak thrown up as above described. The (D) pair remained close together, but never indulged in any courtship actions. The unpaired ninth bird was one with hardly visible ruff and crest—apparently still in winter plumage. It was not seen to go into the search attitude or manifest any other sexual activity.

March 11th.—A number of boats on the lake. Much calling and excitement by Grebes when a boat came into their territory. One was seen swimming along outstretched flat along the water, in an almost typical coition-attitude, with head occasionally turned from side to side. This I have never seen so early, or in a solitary bird.

I should also like to put on record a ceremony I saw at Blenheim in the late spring of 1922, since it was different in detail from anything which I have previously noted in the species.

A pair were close together on the open water. The male went into the search or hostile attitude, and, in this pose, with ruff sweeping the water, swung back and forwards over a small arc of a circle. The female, meanwhile, assumed the typical head-shaking attitude with partially-erected ruff and vertically-stretched neck, and remained close *behind* her mate. After perhaps half a minute, the ceremony ended, but was repeated twice more at short intervals. Finally it was performed again, but with the rôles of the sexes reversed, the female in the search attitude, the male in the shaking attitude. The male, however, now seemed much less interested, and played his part rather half-heartedly.

I had previously noted (Huxley '14) the great individual variation in courtship-actions between pair and pair. The above is an extreme case of this variability, the search attitude never having been previously observed by me as forming part of any courtship ceremony. It is further of interest as providing another example of a ceremony, the "mutuality" of which is only apparent when it is found that either bird plays either of the two rôles in the ceremony on different occasions.

We may sum up the chief points of interest as follows:—

- (1) At Blenheim Crested Grebes are absent in winter. Most depart by the end of October, a few stay till the end of November. They return from the end of January or beginning of February until April.
- (2) Some birds are seen in pairs immediately after arrival, and presumably are previously mated birds. Others are solitary for some time after arrival. The solitary males probably arrive on the whole before the solitary females.
- (3) Courtship ceremonies of various types may start very soon after arrival. The earliest head-shaking was seen on February 28th.
- (4) The building of a nest or, more probably, a pairing-platform, was noted on March 3rd, over a month before egg-laying normally starts.
- (5) Several new variations of the previously recorded courtship ceremonies are recorded, as well as one new type of courtship ceremony.

* * * *

Mr. Edmund Selous has been kind enough to let me see the unpublished MS. of a long paper on the behaviour of the Great Crested Grebe at Tring reservoirs in early 1915. In all essentials, we agree. The first arrivals were about February 15th, and birds kept on arriving until the first week

in March or later. Many of the birds on first arrival were already paired. Courtship, including diving for weed, followed by the "Penguin dance," and also the "ceremony of discovery," occurred quite or almost from the start. The "search attitude" by single birds seems to have been less prominent than with my birds. There were numerous cases of odd birds being attacked from under water by one of a mated pair. No mating up ceremonies of any sort were noted. The first sign of nest or platform building was noted on March 6th ; another was also noted on March 7th.

Thus these observations and my own put the early annual history of the Grebe into quite a new light. There is no courtship until after pairing-up. The previously mated birds arrive paired. The unmated birds try and secure mates, either by "butting in" to already mated pairs, or by attracting other unmated birds, apparently by the "search" call and attitude.

I wish to express my best thanks to Mr. Selous for allowing me to refer here to his most interesting and painstaking observations.

ON THE SCIENTIFIC NAMES OF THE LIGHT- AND DARK-BREASTED BRENT GEESE.

BY

EINAR LÖNNBERG.

It has long been known that two different forms of Brent Goose (*Branta bernicla*) occur during the winter on the coasts of Europe, viz., a dark-breasted and a light-breasted. Concerning the systematic value of these forms opinions have been much divided. Some ornithologists considered them to represent geographical races, while by others they were regarded as mere colour-phases without any systematic value whatever. The present writer shared from the beginning the former of these opinions, but when it was asserted that both forms occurred together, even at their breeding-places, the latter view, although strange, appeared to be the correct one. This was the state of affairs, until quite recently the Rev. F. C. R. Jourdain in this Journal (*antea*, pp. 49-52) again took up the question and most ably discussed it. In this paper he shows that probably the two colour-phases of Brent Goose have different breeding-ranges, and that the dark-breasted one has a more eastern origin, while the light-breasted, at least, chiefly belongs to the Atlantic part of the Arctic. If treated as geographical races, the question arises as to which of them is entitled to the name *bernicla* Lin. The Rev. F. C. R. Jourdain at the same time commended to the present writer "the important duty of ascertaining upon what material Linnæus based his name." This I am quite willing to attempt, and I do not think it is a difficult task.

The name "*Anas Bernicla*" was given by Linnæus in *Systema Naturae*, ed. X., 1758. The diagnosis proves only that it was applied to a Brent Goose, but he adds: "Habitat in Europa boreali; migrat supra Sveciam." *Fauna Svecica* (of 1746) is also quoted in the first reference; and there it is stated that the bird in question: "Habitat in Scania." It must however in this case be understood that it occurs in Southern Sweden only during migration. In the second edition of *Fauna Svecica*, 1761, the information about "*Anas Bernicla*" is somewhat fuller, as it is stated: ". . . . Calmariensibus Prutgås. Habitat in Scania, Calmariae, marina, migratoria." That is, it is called Prutgås by the inhabitants of the city of Kalmar and migrates along the coast of the district of Kalmar. At the present time at the place mentioned there is still a very important migration route of

Brent Geese, and these must be of the same kind as those migrating there at the time of Linnæus.

The Brent Geese which migrate on our Baltic coast belong to the dark-bellied form. In the R. Nat. Hist. Museum there are seventeen dark-bellied specimens from Sweden to one light-bellied.

The older Swedish faunistic authors always describe the Brent as dark-bellied. Thus A. J. Retzius says in his new edition of *Fauna Svecica*, of 1800: "Venter et Latera fusca marginibus pennarum pallidioribus," and Sven Nilsson, in the various editions of his faunistic works, terms the under-parts of the Brent "brown-grey" (with paler margins). It may be concluded from this that it really is the dark-breasted Brent which has the right of primogeniture to the name *bernicla*. There is, however, a still better proof for such a statement, viz., from Linnæus's own hand. He has given a complete description of *Anas Bernicla* in *Fauna Svecica* of 1761, which appears to be a product of his own direct experience. It reads: ". . . Corpus totum nigro-fuscum. Nigra sunt Rostrum, collum, caput, pectus. Collare angustum, album. Remiges & Rectrices supra atræ, subtus fuscae. Alba sunt Abdomen pone pedes, tectrices inferiores caudæ & latera uropygii." The author says thus plainly, that the general colour of the bird is dark brownish and adds the "black" and "white" exceptions from this rule, which leaves the breast dark brown.

It is also very probable that the Brent Geese, which pass on their migration along our Baltic coast, are of north-eastern origin. The faunistic authors of Finland, such as M. von Wright and Palmén, also use the same word "brown-grey" for the description of the colour of the lower side of the Brent as their Swedish colleagues.

The occurrence of light-breasted Brent Geese now and then in Sweden still requires explanation, and I think this can be done by pointing out that sometimes, although seldom, even such a typical Spitsbergen bird as *Anser brachyrhynchus* passes through our country, so in an analogous way may a light-breasted Brent of similar origin sometimes take the same unwonted route.

It cannot, however, be denied that the Brent Geese of Spitsbergen exhibit a certain amount of variation in the colour of the lower breast. Some of them are decidedly whitish, but others are darker, with a more or less brownish or ashy tint on the breast. A direct comparison proves, however, at once that they are far less dark than the average

eastern birds which migrate along the Baltic coast of Sweden. At least this is the case with such specimens as I have seen, and we have one of that kind in this Museum from Northern Spitsbergen. I think, however, that it is these somewhat brownish, but anyway rather light birds, which have given rise to the saying that there are all kinds of intergradations between the dark- and the light-breasted Brent Geese.

As stated above, until 1761 everything written by Linnæus about "*Anas Bernicla*" applies to the presumably Eastern and in any case dark-breasted Brent Goose migrating "supra Sveciam."

In *Systema Naturae*, ed. XII., 1766, the above quoted name acquired a wider bearing and became more collective, as Linnæus added there "nidificat in Groenlandia." Probably he had received information from his Danish scholars about the nesting of Brent Geese in Greenland, and in consequence of this made the addition quoted. This is, however, of no importance as regards the fixing of the name *bernicla* on the dark Eastern Brent migrating over Sweden, which first received it.

If there is no doubt concerning the name of the dark-breasted Brent Goose, the question of the name of the light-breasted is by no means so simple as Mr. Jourdain appears to think, when he says: "For the pale-breasted bird Brehm's name of *collaris* seems applicable." The name *collaris* belongs without doubt to this bird, but there is an older name which appears to have priority, although it has been wrongly interpreted several times. This is the name "*Anas Hrota*" given by O. F. Müller, 1776, *Zool. Dan. Prodr.*, p. 14. Recently Laubmann has attempted to apply this name to *Branta leucopsis* as was also done previously, although with hesitation and a query by Salvadori (*Cat. Birds B.M.*, XXVII., p. 117) and Hartert (*Vögel, pal. F.* II., p. 1296)*; but this interpretation of the name "Hrota" I do not hesitate to describe as entirely wrong. Müller writes: "*A[nas] Hrota grisea, capite colloque nigris. . . . Isl.[andis] Hrota . . .*" i.e., a bird with black head and neck, which is called by the Icelanders "Hrota." It is true that the head and neck of the Brent is not *pure* black, but the old authors always called it black. The head of *B. leucopsis* on the other hand is so largely white, that in such a summary description as the one quoted it would have been more likely to have been described as "*capite albo, collo nigro.*" In any case the white of the

* In the latter place by misprint "krota."

head of *leucopsis* could not have been disregarded. Further, we learn that the bird to which Müller applied the name "Hrota" was known to the people in Iceland under that same name, and this is still the case with the Brent at the present time. Hantzsch quotes for this bird the Icelandic names "Hrotgás" and "Hrota," and he says that the latter probably is derived from the verb "hrjóta," which means "to snore." It is certainly an onomatopoeic word referring to the note of the Brent, like the German name Rottgans, the Danish Knortegaas, the Swedish Prutgås and so on. I think it is impossible to deny that Müller's name "Hrota" refers to a Brent Goose.

It remains then to be seen whether there is any possibility of ascertaining to which race this name was affixed, and even this appears to be feasible. *A. Hrota* of Müller bears the number 115. The bird No. 114 is : "*A. Bernicla fusca capite collo pectoreque nigris, collari albo.*" This is evidently the same thing as Linnæus's Brent Goose, while the following species "*A. Hrota*" was considered by the author as somewhat different, for it is marked with an asterisk, which according to the explanation in the preface means those species which "in scriptis perillustris Equitis a Linné frustra quaeruntur." The difference, which is apparent in the diagnosis, is that the Linnean bird is said to be "*fusca*," while the new one ("Hrota") is termed "*grisea*"; the former name appears to suit the eastern dark-breasted race quite well, and the latter the light-breasted. If to this is added the geographical assertion that "Hrota" is the Brent found on Iceland, I think it must be admitted that this latter name is available for the light-breasted Atlantic Brent Goose and *collaris* Brehm becomes only a synonym.

NOTES

“ BRITISH BIRDS ” MARKING SCHEME.

“ RINGERS ” are requested to send in to the Editor, not later than November 1st, their schedules, together with a list showing the number of each species ringed.

THE INTERVAL BETWEEN BROODS OF DOUBLE- AND TREBLE-BROODED BIRDS.

WITH reference to the recent notes on the intervals between broods of double- and treble-brooded birds (*antea*, pp. 72, 106), the following observations, taken in 1921, on the nesting of a pair of Robins (*Erithacus v. melophilus*) may be of interest.

The first nest was in an ivy-covered stump, the second in some ivy on the house wall across a lawn, about twenty yards from the first, and the third was near the first in the ivy on the stump.

Nest complete.	First egg.	No. of eggs.	Young left nest.
I. May 3	May 10	4	June 10
II. June 9	June 10	5	June 29 (destroyed by cat)
III. —	July 3	4	August 4

The third nest was not observed until July 4th, when it contained two eggs.

ALISTAIR C. FRASER.

THE TIME-PERIOD FOR NEST AND EGG REPLACEMENT.

ALL field-ornithologists interested in oology know that all birds, practically without exception, replace a set of robbed or otherwise destroyed eggs in an extremely short space of time, if not discouraged by the near approach of autumn. I think it is reasonable to say that eleven days is the average “recovery” time for all our small birds early in the season. There is, however, a theory (or is there any proof?) that if eggs are much incubated when taken the time-period is appreciably greater than if they had been fresh when destroyed. I gave some examples as regards Bonelli’s Warbler (*Phylloscopus bonelli*) in *B.B.* Vol. XV., p. 156, which showed that whether eggs are fresh or much incubated the “recovery” period is sometimes identical. The following notes on the subject may be of interest:—

On April 13th, 1924, I took two Woodcock (*Scolopax rusticola*) nests each of four eggs. One lot (set “A”) was much

incubated and the other (set "B") was fresh. On April 27th set "A" bird was sitting on four fresh eggs, eight yards from the first site—time-period in this case was therefore at most fourteen days. On April 20th set "B" bird had laid its first egg ten yards from its first site. The clutch was presumably complete on April 23rd, but the nest was not re-examined until the 27th, when it contained four slightly incubated eggs. The time-period in this case was ten days only, and shows that, whether eggs are much incubated or fresh, the "recovery" period in the case of these Woodcocks did not differ very materially. As regards large birds, I have not many notes as it is not my practice to take or encourage others to take second or subsequent sets of eggs from any robbed pair. I have, however, notes on a Raven (*Corvus c. corax*) that had six eggs, six days incubated, on March 21st. They were taken and an alternative site, in very bad condition, was repaired and contained five much incubated eggs on April 16th (say ten days' incubated at least). This makes a time-period of sixteen days only. Can anyone throw light on the time-period for rebuilding only, in the case of elaborate nest-builders, e.g., Long-tailed Titmouse (*Ægithalus caudatus*)? W. M. CONGREVE.

SCARCITY OF YELLOW WAGTAIL.

DURING the last three or four years I have frequently visited the water meadows in the Kennet valley near Reading (Berkshire), and in one locality I should think at least four or five pairs of Yellow Wagtails (*Motacilla flava rayi*) have been nesting each summer. In 1924, however, although my visits to this particular locality have been more frequent than usual, I have not seen a single Yellow Wagtail.

A. STEVEN CORBET.

SPOONBILL IN SUFFOLK.

ON April 20th, 1924, a Spoonbill (*Platalea leucorodia*), flying from the northward, arrived on the marshes near Dunwich, Suffolk, and stayed for three days. At 200 yards the plumage appeared to be pure white and the legs dark in colour. The beak was black for the greater part of its length and the broad tip of a lighter colour could be seen through glasses. The bird frequently waded, swinging its beak in a wide arc from side to side through the shallow water. A full plume adorned the back of the head and fell forward like a beard when the head was lowered. Flying, the wings were at full stretch. The Herons feeding in the neighbourhood were markedly disturbed by the dazzling stranger. R. C. DAVISON.

SPOTTED REDSHANKS IN CHESHIRE.

ON August 26th, 1924, on a sewage farm near Altrincham, Cheshire, I noticed a couple of red-legged Waders close to the edge of one of the settling tanks. Through the glass I saw that they were darker than Common Redshanks (*Tringa totanus*), that their bills were longer, and that there was a dark line through the eye, thrown up by a white superciliary streak. When they rose and showed the white back but dark tail-coverts, and the absence of the conspicuous white secondaries, I saw that they were Spotted Redshanks (*T. erythropus*) and the double note, *tchwee, tchwee*, repeated frequently as they flew round, was confirmatory evidence. The avifauna of the farm varies almost daily, and on the 26th no Common Redshanks were visible or audible.

Captain A. W. Boyd, when he heard from me, visited the farm on the morning of the 27th, and saw both birds well, when they were feeding alongside and flying with seven Common Redshanks, but on the 28th I could find only one, and it was consorting with three of the commoner species. In flight together the contrast in wing pattern, size, length of bill and leg, and note, was most distinct. Also I saw the bird standing on the mud about ten or fifteen yards from where I was sheltered by a bank, and noted the spots and pose. The bird normally stands less erect than the Common Redshanks, more like the Greenshank, with the body at right angles to the legs.

On the 30th Mr. Travers Hadfield accompanied me, and we found the same bird still there, but this time consorting with nine Common Redshanks. It was quicker on the wing, constantly forging ahead of its companions, and even at a distance it was easy to pick it out by its greater size and longer bill and legs.

T. A. COWARD.

AVOCET IN SOUTH DEVON.

ON August 18th, 1924, I saw an Avocet (*Recurvirostra avosetta*) on Dawlish Warren. When first seen it was resting on a mud bank amongst various Gulls. Its black head and neck first attracted me (as I scanned the bank with my glasses) and the characteristic black bands on the back and wings. The sun shone on the bird and as it rose its long blue-grey legs and partially webbed feet were quite distinct. I could not get a glimpse of its beak, as it flew away from me.

On August 26th, when I visited the place again, the mud flats were well exposed. I saw the Avocet running rapidly over the ooze, feeding as it ran. It constantly dipped its

head down, gliding its long slender upturned beak along the ooze as it ran. Its long blue-grey legs and partially webbed feet were again very conspicuous. It occasionally raised its pointed black-tipped wings overhead as it ran, but it seemed very loath to fly. On getting within twenty-five feet of the bird, it took to the water and swam rapidly along, dipping its beak from side to side along the surface of the water as it swam. It afterwards left the water and again came on the mud, but it could not be persuaded to take to flight. I first saw the bird about 11.30 a.m., and when I left about 3.30 p.m. it was still feeding happily. F. COLLINS.

ON August 21st, while watching for autumn passage migrants at Dawlish Warren, on the Exe Estuary, I had the good fortune to identify an Avocet.

When first observed the bird was standing quite alone at the edge of the receding tideway, and its upturned black beak, long blue legs, and characteristic white and black plumage were easily recognizable through glasses. I watched it on and off for about two hours, and at one time was able to approach to within about 100 yards while feeding. It appeared to feed more in the shallow tideway than on the mud—but in both cases its side-to-side action of the bill was very noticeable. I was also struck by the very high knee-action of its long leg while wading, and the rapidity with which it covered the ground.

As some schoolboys with guns were pot-hunting in the vicinity I thought it best to try and drive the bird away to safer quarters. As I approached it, however, I was not a little surprised to find that, instead of taking wing, it began wading deeper and deeper until it was swimming away buoyantly at a considerable distance from the shore. My last view of the bird was feeding among some Gulls further down the estuary. Let us hope that it may escape destruction.

R. M. BYNE.

LATE NESTING OF WOODCOCK.

I FLUSHED a Woodcock (*Scolopax rusticola*) near Methven, Perthshire, on August 30th, 1924, from a brood of four freshly hatched chicks. An examination of the nest showed that the egg-shells were still wet, and apparently not an hour broken. A. H. R. WILSON.

ON August 18th, 1924, I ringed two young Woodcocks at Capenoch, Dumfriesshire. They were unable to fly, the wing-feathers being still in the quill, and the old bird squealed

like a rabbit as she flew off them with her legs hanging down.

HUGH S. GLADSTONE.

[I have notes of several Woodcock's nests with eggs at the end of July and one on August 5th.—F.C.R.J.]

BLACK GUILLEMOT IN PEMBROKESHIRE.

IN his *Birds of Pembrokeshire and its Islands*, published in 1894, the Rev. Murray Mathew writes: "Since the commencement of the present century the county has lost the Black Guillemot from its list of resident birds." Later on in the same work he says: "A century ago there were a few Black Guillemots resident on the Pembrokeshire coast. None now breed south of the Isle of Man, and the bird has deserted Anglesea and the neighbourhood of Llandudno in North Wales, where it was reported to occur by Pennant. There is no specimen of a Pembrokeshire Black Guillemot now existing that we know of in any collection of the birds of the county; nor is the bird, in virtue of a chance straggler floated to our shores, at the present day included in any list of the birds of the county."

In view of this fact it may be of interest to place on record that on June 18th, 1924, I saw one Black Guillemot (*Uria g. grylle*) at St. Davids, Pembrokeshire; the bird was unmistakable as it flew from behind a headland, straight towards me, passing within a few yards, so that the black underparts, white wing patches, and red feet were seen clearly. Later on it reappeared and settled on the water for some time; on leaving the water it perched on a rock at no great distance, so that I was able to observe it with ease.

CLEMENCE M. ACLAND.

THE ROOSTING-HABITS OF THE TREE-CREEPER.—With reference to the habit of *Certhia familiaris* roosting in holes in the soft bark of Wellingtonias, described in Vol. XVI. p. 284, XVIII, p. 20, Mr. Alistair C. Fraser informs us that he has seen these roosting-holes both in the neighbourhood of Birkenhead, Cheshire, and in North Wales.

SANDWICH TERN BREEDING IN SHETLAND.—Mr. H. Jamieson states (*Scot. Nat.*, 1924, p. 52) that an egg obtained in 1923 from an outlying island near the Outer Skerries Lighthouse has been identified as undoubtedly that of a Sandwich Tern (*Sterna s. sandvicensis*). Only one pair nested on this island. Mr. Jamieson adds that he has observed the birds for five years and that the fishermen say that a pair here and there have nested for a "good while back." The bird has not previously been recorded as breeding in the Shetlands, though it has in the Orkneys.



LETTERS

THRUSH IMITATING NOTE OF GREEN WOODPECKER.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the correspondence (*antea*, pp. 88, 117) as to the Song-Thrush imitating the notes of Waders, the following may be of interest. About twenty years ago I was staying at Grosmont in Monmouthshire. The place is situated on the side of a wooded valley which literally swarms with Green Woodpeckers (*Picus viridis virescens*), so much so that I do not exaggerate when I say that there was scarcely a minute of the day in which the loud laughing note of this bird could not be heard. I saw, too, several at once on the ground at an anthill devouring the insects. On one occasion I was waiting for my friend to come out for a ramble when I noticed the Woodpecker note constantly repeated, but coming all the time from one particular spot—an apple tree in the orchard. This struck me as strange, so I went to investigate, when I discovered, to my surprise, that these "Woodpecker notes" proceeded from a Song-Thrush (*Turdus ph. clarkei*) which kept repeating them over and over again! I concluded that this Thrush had been reared in the neighbourhood, and, from hearing the Woodpeckers' laughing cry so incessantly all around, whilst it was a nestling, it had acquired that song instead of its parents' notes.

H. E. FORREST.

SONG-THRUSH IMITATING WADERS AND OTHER BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the notes on the Song-Thrush imitating the notes of the Redshank (*antea*, pp. 88, 117), two or three years ago, in St. James's Park, I heard a Song-Thrush frequently repeating the cry "whee, whee, whew" of the Wigeon.

A. CAMERON SHORE.

THE NORMAL CLUTCH OF SANDWICH TERN'S EGGS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the Rev. J. R. Hale's letter (*antea*, p. 118), it may be of interest to state that during the last season there were two clutches of three eggs of the Sandwich Tern (*Sterna s. sandvicensis*) in the Ravenglass or Drigg Colony in Cumberland.

Up to May 5th only one pair had been seen and that early in April, and the breeding site was colonized by a late migration towards the end of May, the 24th I think.

H. W. ROBINSON.

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ON THE NESTING OF THE FLAMINGO IN THE CAMARGUE.

BY

W. E. GLEGG.

THE Flamingoes (*Phænicopterus r. antiquorum*) of the Camargue, so far as British ornithological literature is concerned, would appear to be surrounded by, at least, a little mystery, which deepens when one thinks of how accessible this strange district is, say, from London. The results of Dr. Eagle Clarke's visits in 1894 and 1896, and that of Mr. C. Ingram in 1908, rather add to than reduce the problem. In his remarks (*Ibis*, 1895, pp. 198-201) on the Flamingo population of the district, Dr. Clarke expresses the opinion that in 1894 the numbers did not exceed 600 "at the very most." It is also stated: "On 31st of May, when we last saw them, the Flamingoes had not commenced to nidificate, and it is extremely doubtful whether any attempt would be made to nest in the Camargue in the dry season of 1894." On visiting the Camargue in September, 1896, Dr. Clarke (*t.c.*, 1898, pp. 479-81) modified his estimate of the Flamingo population, placing it at from 1,000 to 1,500 individuals. On September 20th, on the east shore of the Etang Valcarès, nearly 100 nests of the season were found, which, it was considered, had been robbed "to their last egg." During this September visit at least 1,000 birds were examined, "but not a single young or immature bird was to be detected in their ranks." Mr. C. Ingram, in his paper "Bird Life in the Rhone Delta" (*Field*, 1908), describing his experiences with the Flamingo, states: "In company with three keepers, I devoted a whole day in exploring the western half of Valcarès lagoon in a boat, but, unfortunately, we failed to find a nesting colony of Flamingoes, although the men took me to a spot where they declared a number had bred during the previous summer."

It will be seen that neither of these observers found either eggs or young of the Flamingo. In this respect we were more fortunate during our visit in May and June, 1924, but our partial success seems to increase the questions to be answered. As the Flamingo was the most attractive of the various birds which we hoped to see in the "Ile de la Camargue," we immediately devoted attention to the Etang du Valcarès. A glance at the official French map will show that the large area of water, which is often described under this name, really consists of a series of lagoons bearing different

names. During the course of our visit we waded wide stretches of these étangs, but nowhere did we find a greater depth of water than two feet at the outside, mostly it was shallower than this. A naturalist living in Salon, with whom I had corresponded, informed me that the spring had been



OUR FIRST FLAMINGO'S EGG.
(*Photographed by W. E. Glegg.*)

very wet. While in the district we could see a marked diminution in the size of the étang and also in its depth. Attention must be drawn to the influence of the wind on the water of the étang. With a change of wind, especially if it remained in one direction for any length of time, large stretches of mud would become covered or uncovered. We could not

avoid noticing the brine-shrimp (*Artemia salina*) described by Dr. Clarke. It was noticeable that the little shrimp, which, no doubt, constitutes the food of the Flamingo, suffered heavily by these movements of the water. When a stretch of mud became exposed, countless numbers were left stranded, and could be seen especially in the depressions made by the feet of cattle. While considering the conditions, the constantly prevailing mirage must not be overlooked. The buildings of the village, although it was a considerable distance from the étang, when viewed from the islands, appeared to rise from the water. This condition of the atmosphere materially reduced visibility, and observation with glasses was peculiarly difficult; my telescope, even at its lowest power, 30 x, was of no assistance as regards the Flamingoes, merely increasing the distortion.

On our initial effort to find the Flamingoes we did not carry waders, confining our attention to the shores of the étang. Plenty of birds were seen, but nothing to indicate that they were nesting. On the following day, May 20th, we carried waders, and proceeded to explore the islands. At first our experiences were most discouraging, island after island was visited without result. Apart from an occasional Tawny Pipit, Crested or Sky-Lark, the dearth of bird-life was very striking. We had started from the western shore and worked eastwards, and when time compelled us to return to Stes Maries we decided to do so by the southern shore, visiting some of the islands in this direction on our way. Fortune made ample amends, for before we had finished our day's wading we had witnessed as magnificent a spectacle as could gladden the eye of a bird-observer. We had not made much progress through the first stretch of water before matters became a little enlivened. A number of Gull-billed Terns, of which species we had seen occasional birds earlier in the day, made their appearance, and, by their actions, I was confident that they must be nesting at no great distance, but as I hope to have something to say on this species in a separate note, for the present it can be dismissed. On reaching the first island we found it tenanted by many nesting birds, and threading my way among the many nests I was surprised to see a large white egg lying among the low vegetation, just above high-water mark and about a foot from a Tern's nest. I had found our first Flamingo's egg. Continuing our search of the little island my companion found eight more eggs which were laid on the mud in an area of about three square yards, and there was not the slightest sign of nest-making.



A BATCH OF THE LAYING OF 200 EGGS.

(*Photographed by W. E. Glegg.*)

No Flamingoes were seen near the island. Leaving the eggs as we had found them we continued on our way to the next island to the south, and signs were not wanting that we had struck a district with a good bird population, but there was nothing to suggest the wonderful experience which was soon to be ours. As we approached the island we could just see the heads and necks of Flamingoes on the more southerly side, and as the distance lessened we could see that they were present in great numbers. On leaving the water we progressed cautiously; the wind was blowing towards us, carrying with it a babel of trumpeting-gagging and also a very powerful stench, which was the first indication that we had found a nesting ground of the Camargue Flamingoes. We had before us a mighty concourse of birds, packed closely together. They stretched from the vegetation across the mud well out into the water. We edged off obliquely across the island so as not to get too near the herd, but most of the birds in the water rose simultaneously in the air, presenting to our view the brilliance of their plumage and enhancing an already indescribable scene. The birds on the mud remained fast; most of them were standing, and the large white, chalk-like eggs could be seen under them, scattered carelessly about like so many pebbles. A few of the birds were sitting. At this moment we were close enough to have obtained valuable photographs, but we had no cameras with us. To estimate the numbers of such a phalanx of birds methodically was impossible, but we felt that in placing the number round about 2,000 we were not exaggerating. On the following day we set out, full of hope, laden with our photographic apparatus, and found the mass of Flamingoes as on the previous day, but they acted differently, as they all left the island without allowing us to approach so closely. We then proceeded to examine the ground, and a count showed that there were over 200 eggs. In one or two cases there were signs of attempts at nest-building, but the majority of the eggs were laid without preparation. There was one well-made nest about a foot high. We had evidently found an old breeding ground as there were the remains of many old nests, which were mostly placed within a yard of each other. These eggs were completely deserted by the Flamingoes. I felt considerably troubled, as we might have been the cause, however innocent.

On May 23rd, the Flamingoes were congregated on the island where we had found the single egg, and, studying them through my glasses, it appeared that they must be laying, so, although I had intended to get photographs there,



THERE WAS ONE WELL-MADE NEST.
(Photographed by W. E. Glegg.)

I did not go near the island so that the Flamingoes might have every chance. The following morning there was not a Flamingo to be seen near the island, so, in the afternoon, I waded across to investigate. I discovered that quite 100 eggs had been laid close to the eight previously found. In many cases nests had been started. These eggs were left undisturbed, but the birds did not return. Later, with a change of wind, practically all these eggs were covered by the water. On May 31st, the birds had gathered on an island still further to the north and appeared to be laying again, but in this case I was unable to obtain the necessary confirmation.

It is difficult to understand the significance of these three, probably four, layings. Professor Newton, in his *Dictionary of Birds*, makes the following vague statement in the article on this species: "When time or place is wanting, the hens seem to drop their eggs at random." It is difficult to believe that it is part of the habits of the Flamingo to lay its eggs and leave them to their fate simply to get rid of them. In the case of two of the layings, which I have described, I have every reason to believe that the birds were not disturbed by human agency; it would be difficult to imagine a more unfrequented spot than this wild étang. If we consider the other laying of 200 eggs, from which we disturbed the birds, as a serious nesting operation, then our experiences would shed fresh light on the nesting habits of the species. This would mean that at times, at least, the Flamingo laid its eggs first and afterwards formed the mound; whereas it appears to be accepted that the mound is first formed and the eggs laid in its cup later. It might also mean that on occasion incubation was conducted without any nest.

All the eggs that we found, over 300, gradually disappeared until none were left. I never discovered by what agency the eggs were taken; the only scavengers that I saw near the islands were some immature Gulls, Black-headed and Herring, and it is not improbable that they were responsible.

These experiences, brief but interesting, were all that we gained of the nesting habits of the Flamingo, but we could always see the birds when we visited the étang. Our experiences confirm those of other observers as to the difficulty of approaching these birds; on several occasions, camera in hand, I endeavoured to stalk them. For a time they would go on feeding, then when the distance became noticeably less they would move off with stately stride and finally break into flight. The presence of the Flamingo could also



GENERAL VIEW OF NESTING GROUND OF THE FLAMINGO IN THE CAMARGUE.

(Photographed by W. E. Glegg.)

be ascertained by an examination of the mud, as the imprint made by their feet is of a very characteristic anchor-like shape. In some parts of the étang wide stretches of mud were covered by a net-work of these imprints. The flight of the Flamingo is not always fully described; it is true that the neck and legs are carried outstretched, but not in a straight line with the body, as is stated. When on the wing the form of the bird may be likened to a plateau, the neck and legs forming gentle slopes to the body, which serves as the summit. The two extremities, the feet at one end and the head at the other, appeared to be level, and a straight line drawn between these two points would not touch the body. That the birds vary in size was apparent. When feeding they would advance steadily with measured step, the head being under water. While watching the Flamingo behaving in this manner I did not see the head raised. Has the bird the power of swallowing food without altering the position of the neck? Do the Flamingoes winter in the Camargue? Mr. Ingram states: "To a certain extent Flamingoes are undoubtedly sedentary in the Camargue, but local inquiries elicited information that the numbers were by no means constant, and varied considerably according to the climatic conditions, thereby indicating a slight migratory movement." Mr. L. Griscom in his paper, "Winter Avifauna of the Camargue" (*Ibis*, 1921.), states that he did not see any Flamingoes, but that a flock, estimated at 500-700, had been seen three days before his arrival, 29th December. Dresser states: "The Flamingo is a summer resident in Europe," and Dr. Hartert's statement: "In Europa Zugvögel, die in Afrika überwintern," leaves no room for ambiguity.

While stating that the greatest number of Flamingoes which we had in view at any one time was about 2,000, it cannot be assumed that this was the total population, for it is quite possible that there were many more in parts of the huge lagoon beyond our view. However, even if there were no more than this number, it would appear that the Camargue Flamingoes must be maintaining their strength, and it is exceedingly difficult to understand how this can be done unless a number of young are reared annually. If there is a certain amount of obscurity with regard to the Flamingo in this district, it is probably due to the fact that the ground has not been properly worked.

SOME POINTS IN THE BREEDING BEHAVIOUR OF THE COMMON HERON.*

BY

J. S. HUXLEY, M.A.

THE following is an account of some " co-operative watching " of Herons (*Ardea c. cinerea*) undertaken by members of the Oxford Ornithological Society in the spring of 1923, at a small heronry about six miles from Oxford. Permission to watch was kindly granted by the owner, Mr. Percy Fielding. Some additional notes made in 1924 are also appended.

The heronry stands in a small spinney, the only piece of wood for over a mile in any direction, on the border of a large flat area of grass-land liable to flooding in heavy rain. Several visits were made in January and February ; on none of these were any Herons seen in or near the spinney until February 25th, when three birds were scared up from the heronry. A small bird-watching tent was erected on February 28th, when seven or eight birds were near the nests. A plan of the nests, old or new, was made, and each nest numbered on this.

On March 4th a few birds flew up from the spinney as two watchers approached ; one bird was seen flying over with a large stick in its mouth. No bird, however, returned to the nests during the two hours spent in the tent.

The most interesting fact observed on this date was that a group of seven birds was standing in a field, about fifty yards from the edge of the spinney, and therefore about one hundred yards from the nests, before we arrived. Most of the birds had their heads down on their shoulders, and remained motionless for the five or six minutes we watched them. No signs of ceremonial activity were seen. The whole group flew off in spite of our efforts to enter the wood unobserved.

Further, while one observer was in the tent, the other noted a group of some half-a-dozen birds in a field several hundred yards to the other side of the wood.

March 8th, 1923.—No birds noted in the fields. Two, or three, nests occupied.

March 10th, 1923.—Five, or six, nests occupied.

March 13th, 1923.—Seven nests occupied.

March 15th, 18th and 22nd, 1923.—Seven, or eight, nests occupied.

* Contributions from the Oxford Ornithological Society, No. 2.

It appears that only eight of the twenty-four nests seen (a number of which, however, were only remains of nests) were occupied this season.

I will not attempt to go into great detail, but will merely summarize the points which seem of greatest interest.

At the beginning of occupation, either one or both birds of a pair may be on the nest ; but it appears that often, at the outset, the birds simply sit in the branches above the nest. One or two dates may be useful.

Nest 3.—March 4th, no birds. 8th, one ; (?) two. 10th, the pair ; greeting ceremony. 11th, the pair ; building. 15th, the pair ; no building ; greeting ceremony ; copulation. 18th and 23rd, only one seen, sitting.

Nest 7.—March 4th and 8th, none seen. 10th, one on nest. 11th, the pair ; building ; ceremonies. 18th, only one seen, sitting.

Nest 11.—March 4th, none. 8th, the pair ; food- or stick-presentation. 10th, one bird. 11th, the pair ; copulation. 15th and 18th, only one, sitting.

It is, of course, dangerous to draw many conclusions from observations taken for sometimes only two or three hours in the day. But it is, I think, clear that there is probably a preliminary period in which the pair simply takes possession of the nest (staking out territory). During this period the birds often sit in the branches near the nest, not on the nest. Next a period of nest-building or rather nest-repairing, followed by oviposition. During these two last periods copulation may occur ; it was not observed during the first. Incubation follows ; the time from first occupation to beginning of incubation was probably less than fourteen days in nest 3, less than nine in pair 7, less than eleven (or fourteen) in pair 11. In pair 3, at least two days of occupation were seen on which building did not occur or at least was not noted, and at least one day in pair 7. These times, however, represent first approximations only.

COURTSHIP CEREMONIES.

The commonest ceremony may be called the mutual greeting ceremony. A very similar ceremony is found in the Louisiana Heron which I have watched in U.S.A. (see Huxley '23, *Proc. Linn. Soc. (Zool.)* 1923). This occurs primarily when one bird of a pair rejoins the other at or near the nest. Typically, both birds adopt the same attitude, with certain minor modifications. The arriving bird stands erect, and raises the neck to its fullest extent. The neck-feathers at

the same time are bristled up (though not so very prominently as in the Louisiana Heron) ; the head is often pointed slightly up as well, while the crest is elevated (the elevation of the crest is never as marked as in the Snowy Egret or Louisiana Heron, but the crest-feathers in the British species are longer). At the same time the wings are flapped and a raucous, excited-sounding call is repeatedly given. The bird on the nest meanwhile does the same, or is content to call and raise the neck and crest without standing up.

In the small U.S.A. Herons mentioned, a similar ceremony was practically universal immediately a bird on the nest was rejoined by its mate after an absence. Here, however, the ceremony sometimes did not occur at all, and sometimes was delayed till a few minutes after arrival. I do not know whether temperature has anything to do with this restriction of the action.

From its probably original function as greeting, this mutual ceremony has become modified for other occasions: 1. For *nest-relief* proper, when the incoming bird soon takes the place of the one upon the nest. 2. In connection with the *presentation of sticks* by one bird which has been searching, to the other which builds them into the nest. 3. As expression of sudden emotion in a pair which have been together on the nest for some time.

1. *Nest-relief*, e.g., nest 3, March 15th.—One bird sitting. The other arrives 12.45 p.m. ; settles on the edge of the nest. The sitting bird rises. Both stand up to full height, stretching their necks up and rather towards each other, beaks pointing up and nearly touching. No wing-flapping occurred, but both gave a hoarse repeated note. They appeared not to be directly facing each other, but only about three-quarters.

This ceased after perhaps a minute. They stood quiet for a little, and then one flew off, the other settled down on to the nest. Presumably a change of sitter had been effected, although the observer could not be sure of the birds' identity. The departure took place nine minutes after the arrival.

It is interesting to note that in the Louisiana Heron, after nest-relief, the relieved bird fetches one or usually several sticks and presents them to the nest-bird, with a modified repetition of the ceremony ; but here nothing of the sort was observed.

In the above case, the relieving bird (assuming that relief had occurred) appears to have been the male. For at 1.50 p.m. the relieved bird returned ; there was croaking by both

simultaneously, but no ceremony; the new arrival settled down; after one to two minutes the other got up, circled once round, settled above the nest, and shortly after copulated. He then sat quiet for three to four minutes, and finally flew off. An almost identical series of events, except that only the male croaked, and that he did not fly round before copulating, occurred in pair 7 (see p. 160).

The presence of a greeting ceremony when the male relieved, its absence when the female relieved, is of interest, since Chapman (1908, *Camps and Cruises of an Ornithologist*, New York, 1908) believes that this is true of the Brown Pelican. I do not think it is true of the Louisiana Heron, however. Another nest-relief without ceremony of any sort was noted in nest 4 on March 11th, but the sexes could not be determined. The short time spent by the male on the nest is also noteworthy. He remained there but sixty-five minutes, whereas the female had been on for at least two hours. This also appears to apply to many species.

2. *Stick-presentation*.—Energetic building was only seen in pairs 3 and 7. In both cases, one bird (presumably the cock) did all the fetching, the other (presumably the hen) all the placing of the twigs. Both presumed males always presented their sticks with a little ceremony, in general similar to the greeting ceremony, which, however, was rather different in the two individuals. Marked individual differences in courtship ceremonies are to be seen in other birds (e.g., Crested Grebe, Huxley, '14; *Proc. Zool. Soc.*, 1914).

In both cases, the stick-bringers robbed adjacent (unoccupied) nests, some ten to fifteen yards from their own. After pulling out a stick—often after a good deal of indecision and sometimes effort—they flew back with it in the beak. No. 7 always approached his nest from a particular quarter, although this meant going beyond it and then turning. Some time before alighting, both "males" began to give excited cries, and to stretch the neck and raise the crest. Their mates also did the same, though to a less extent, apparently starting in response to the stick-bringers' calls. The "male" lit in the branches some way above the nest, and stooped his neck to pass over the stick. In No. 7 this ended the performance; but in No. 3, the stick-bringer, immediately after giving the stick to his mate, reached his neck and head vertically downwards to the full extent, and waggled the head rapidly from side to side, at the same time clapping the bill to make a strange sound (a similar clapping is also made by fairly large young *Ardea cinerea* when still in the nest). Both

“males” would then sit still for a little, and then go off to fetch another stick.

No. 3 fetched six sticks in thirty-one minutes, and then flew off. He clattered his beak every time but one after presenting it. No. 7 fetched eleven sticks in forty-three minutes, and was then scared away. It started to rob nest 11a while No. 3 was robbing nest 5. Soon after 3 departed, however, it changed and made for nest 5, which was nearer to its own nest.

3. *Expression of emotion.*—Nest 3, March 11th. Shortly after the observer's arrival, which scared the birds, first one and then the other return to the vicinity of nest 3 (8.18 a.m.). They sit in the tree, above and to either side of the nest. 8.37, suddenly, *apropos de bottes*, there is an outburst; both flap, one rather more violently, with necks and crests raised, and repeated note. Shortly after, the bird which had flapped more violently goes through the same process but by itself; then quiet. 8.54, another mutual “outburst.” The less “violent” bird settles down on to the nest, the other continues the ceremony alone for a little. Nothing further of interest till 9.15, when the “male” (unfortunately identification with the more or the less violent wing-flapper was not possible) went off and fetched the first of the series of sticks, as mentioned above.

It is worthy of note that the fetching of sticks by 7 (♂) had a different prelude. One bird arrived near the nest about 8.45, and soon settled down on the nest, but standing, not sitting. The other bird of the pair arrived 9.31, and there was a good greeting ceremony; 9.36, both were standing side by side on the nest, and at 9.39 the “male” went off to fetch the first stick.

Other ceremonies. In the Louisiana Heron, in addition to the “mutual” greeting ceremony and its modifications, there exists a rarer “unilateral” ceremony in which only one bird, probably but not certainly always the male, performs. This is also true for the British species, although the details are different. This ceremony was only seen on one occasion, nest 4, March 22nd (i.e., late in the series of nesting events; nest 4 had been first seen occupied, by the pair, on March 10th; a nest-relief, without ceremony, had occurred on March 11th). One or possibly both birds had been on the nest, but had later left it. 5.12 p.m., one arrived, followed by the other two minutes later. The second arrival sat in the branches by the nest for a little, then climbed through the branches to the neighbouring nest 5, which was now very small after

the robberies of sticks from it (see above). There it stood, facing its mate, uttering deep groans. Then it rose to its full height, and shot its head and neck vertically full stretch upwards, still uttering booming groans. Suddenly it leaned forward and lay flat down on nest 5, stretching its neck horizontally towards its mate, at the same time giving a sudden clicking note. The neck was shot out with a curious rippling motion. At this, its mate in nest 4 shuffled a little and gave a few croaks. The whole performance—upward stretching followed by lying down and forward pointing of neck with clicking note—was repeated several times, the mate on 4 croaking at each climax (when the other gave the click note). There was a short pause, and then, after two strange gulping notes, the performance was repeated at 5.30; three minutes later, the performing bird began to sway gently and rhythmically from side to side while standing. It then suddenly stretched itself, not flat on the nest, but about at an angle of 45° , again giving the click note.

In the absence of other observations, the precise significance of this very remarkable performance is difficult to be sure of. We must, to start with, know much more of the limits of time between which it occurs.

Copulation. This was once seen, as mentioned above, immediately after the relief of a male by a female. A very similar occurrence was noted with pair 7 at 4.45 p.m. on March 11th. One bird (σ) had been standing by the nest for at least an hour, rather restless. Another (♀) arrived, and went right on to the nest, the other giving one croak on its mate's arrival, and shortly afterwards copulating with it. After preening a little, the male flew off.

In another pair (nest 19, March 11th), one had come back and settled close to the nest about 8.30. The second arrived 8.58, and there was a good duet of croaks—presumably a typical greeting ceremony, although I could not see the birds clearly to note crest, pose, etc. They stood quietly till 9.30, when, hearing one croak, I looked up and found copulation in progress. After this, the male shortly moved back to where he had been before, in the branches a little above the other. He went off for three minutes soon after, but then came back and stayed for nearly an hour until scared off.

Thus copulation definitely need not follow immediately on any "courtship" ceremony. On one occasion it followed greeting after half an hour; twice it followed immediately on relief of a male by a female; on the fourth occasion when it was seen, previous events were not noted; the male soon after flew off.

Other points. Nest 11, March 8th. One bird settled; soon gave a resonant call, upon which the mate arrived with a thick dark object in its bill (apparently not a stick), which it gave to its mate, after a short "duet" of croaks. The nest-bird on this shot its neck horizontally in and out two or three times, and then gave a low croak; it could not be seen how it disposed of the object. The other after a little flew off (i.e., no nest-relief).

This again was only seen once. Possibly feeding of nest-bird by its mate? This, however, has not been seen in other Herons, so far as I am aware.

Hostility. When a bird comes too near an occupied nest, the owner thrusts out its neck and beak with a special cry.

Fighting. On one occasion (nest 4, March 11th), after one bird ("A") had settled on the nest, two others ("B" and "C") shortly after lit near by. "B" first drove "C" out of the tree, then turned its attention to "A" and drove it off the nest and right away, then settling on the nest itself. Nothing further until it was scared off an hour later. Here we appear to have definite fighting for territory-plus-nest. Two birds had been seen on or by the nest the previous day.

Miscellaneous. On April 20th, when several birds had young, their behaviour was much bolder, several even refusing to leave the nest-trees while I was in full sight close by; whereas on March 4th, none returned at all during two hours, even after the observer had entered the tent. (On March 10th they returned after a moderate time; on March 11th, and later, several returned within a few minutes of the observer entering the hide.)

Enemies. On both March 15th and 18th, a Magpie was seen carefully examining nest 16. On March 18th two Heron's eggs, apparently eaten by a Magpie or at any rate by some egg-stealing bird, were found on the ground not far away.

Behaviour after young hatched. April 24th, 1923 (windy, overcast). Nest 18 (an unused nest) had disappeared, presumably robbed of all its sticks. The young birds were keeping up a constant squawking and bill-clappering.

6.55 p.m., a bird alights on nest 3. In under five seconds its mate flew off. It was difficult to see clearly through the leaves, but I believe there was a short greeting (nest-relief) ceremony. In any case it must have been very poor compared to such ceremonies during incubation.

NOTES FROM 1924.

Not only the Otmoor, but also the Wytham heronry was visited.

(A) WYTHAM.

February 10th.—A party of four Herons were seen standing silently in a river meadow about two miles from the Wytham heronry. They were put up three times by the watcher; each time they simply flew off a few hundred yards and settled again. This recalls the gathering seen near Otmoor on March 4th, 1923.

February 22nd.—Wytham heronry. Thirteen birds on the nests. One tree was climbed, and the nest found to have fresh sticks. When the heronry was approached, all the birds flew off and lit in a river meadow about half a mile away. They remained quite quiet for fifty-five minutes, when two birds flew up, circled over the heronry, found us still there, and returned.

The reaction of the birds to the strong, cold E.N.E. wind was interesting. They all alit head to wind. In the course of fifty minutes all had faced the other way, first one, then another turning round. When facing the wind, the body was sloping at an angle of about 45° ; when facing down wind, the birds held themselves very erect. There was no exception to this.

March 2nd.—No birds seen at the Wytham heronry; one pair noted in the field where the birds lit on February 22nd.

March 12th.—Six nests apparently occupied. Seven birds at the heronry.

(B) OTMOOR.

February 1st.—No sign of occupation.

February 23rd.—Droppings and feathers under five nests.

One nest with two, another with one dead young one seen.

March 11th.—As on February 23rd.

March 13th.—Six birds came into the wood about 5 p.m. Much noise in trees. No birds there previously.

March 15th.—One bird apparently sitting. Four Herons in the field, one on guard, two resting, and one about one hundred yards off by itself.

From later observations on the young, it appeared that the Wytham birds had started breeding on the average about a week earlier than those on Otmoor. Apparently (see note for February 23rd above) some of the Otmoor birds started breeding too early; the young died, and the next attempt was delayed.

CONCLUSION.

I think that the above account shows that even a moderate amount of watching can accomplish something during the

little-observed period of a bird's sexual life that takes place before the eggs are laid. It is proposed to continue the work as occasion offers.

The mutual ceremonies of greeting, etc., were to be expected after acquaintance with other Herons; but the unisexual ceremonies are interesting and appear to be more complex than in the Louisiana Heron. All these fall under the head of post-mating ceremonies (see Huxley, '23, for discussion).

No actual pre-mating ceremonies were seen, but the gathering of the birds in small companies in the neighbourhood of the heronry before most of them had occupied nests is of considerable interest.

Mrs. H. Brindley (*née* Miss M. Haviland) informs me that in Ireland towards the end of December she once saw a similar gathering of this same species. The birds were in an irregular circle; and one of them suddenly moved into the centre and executed a few half-hearted steps. Unfortunately they were soon after scared up. This gathering was several miles from any heronry. Miss Haviland was also informed by an old earth-stopper in Ireland, whose first-hand knowledge of natural history was considerable, that he had himself several times seen similar gatherings, and had witnessed regular dancing by the participants.

Such "dances" would be very likely to escape observation, considering the season at which they are held, their occurrence in open country and the wariness of the species. All the more reason, therefore, for ornithologists to keep a sharp look-out for them, particularly as, if they really exist, they are obviously pre-mating ceremonies, of which next to nothing is known even in the commonest species (see, for instance, the remarkable account by Martin in the *Field* for March 15th, 1923, of the great pre-mating gatherings of the Common Partridge).

In any event, these few notes illustrate what I believe to be two general rules—(1) that in species of birds in which both male and female resemble each other in colouring *and* share the duties of incubation and care of young, most of the post-mating "courtship" ceremonies will be mutual. (2) That where such birds breed in colonies or do not conceal their nests, a greeting and nest-relief ceremony will occur and will take place at the nest.

I should like to conclude by thanking my fellow-members of the Oxford Ornithological Society—Messrs. Banks, Colman, Elton, Madden, Montague, Stoney and Tucker—for their help in making these observations.

FIELD-NOTES FROM WEST CORNWALL.

BY

G. H. HARVEY.

JAY (*Garrulus glandarius rufitergum*).—Although fairly common in the east of the county, and even so far west as Truro, the Jay has occurred on very few occasions in the Penzance district. This is the more remarkable because there are many wooded valleys draining into Mount's Bay which seem well suited to its requirements. However, in the winter of 1923-24 there was quite an invasion on a small scale. The birds arrived about the end of October and the beginning of November, and between November and April I saw them in practically every woodland of any size in the neighbourhood. They were usually seen singly or in pairs, but I several times saw five or six together at Trewidden near Penzance, and once, on March 15th, 1924, a party of nine there. Although most of the birds disappeared in April, a few stayed into May, but none appear to have remained to breed. The last I saw were two at Tremenheere on April 30th, one at Trewidden on May 5th, and one at Trevaylor on the 23rd.

BLUE-HEADED WAGTAIL (*Motacilla f. flava*).—A pair of these birds have, for the second year in succession, nested at the Marazion Marsh, near Penzance. I saw a male there on April 19th, 1924, another on April 29th, and a pair on May 15th. As in last year, I could find no nest for some time, but at length did so, on June 16th, when it contained six young about a week old. It was in a part of the Marsh that is under water in winter, but in summer is dotted with tussocks about a foot high, covered with bog-willow and rushes, and it was in the side of one of these clumps that I found the nest. Feeding was carried on in much the same manner as last year, except that this year it was undertaken equally by both birds. Generally the fæces were dropped, and I saw none actually eaten. Once, however, I saw the female drop them on rising from the nest, pick them up again, and fly off with them, and on another occasion, when the female was in full flight, she dropped them, caught them dexterously in mid-air, and flew off out of sight with them. In each case it seems probable that she ate them. The young left the nest on June 23rd, but showed signs of a desire to do so earlier, for on the 20th, one young bird was sitting on the edge of the nest, while on the 22nd, one had crept a few inches away into the vegetation on the side of the tussock. The first time I saw any of the

young again was on July 5th, when I saw a single bird still being fed by its parents. I never saw more than two young birds after they had left the nest, so I am afraid some misfortune overtook the others. I last saw the birds on August 11th.

When carefully examined the nest was found to contain, besides the usual materials, sixty-four feathers, none under an inch in length, and a few scraps of rabbit's fur. So thoroughly were the feathers matted down and interwoven with the rest of the lining, that at a casual glance one would have said there were no feathers at all, and I only discovered their presence when I had pulled the discarded nest to pieces.

GREY WAGTAIL (*M. c. cinerea*).—A nest with five eggs, found by myself at Castle Horneck, near Penzance, on April 12th, 1918, and another, found at the same place with fully-fledged young, on May 16th, 1919, appear to be the only records of breeding west of the Truro district.

BLUE TIT (*Parus cœruleus obscurus*).—On May 27th, 1922, I found a Blue Tit, sitting on three eggs, in an unlined Wren's nest. The Wren's nest was built about four feet from the ground in the branches of a young cypress tree, and was very open. The bottom of the nest was divided into two compartments by a twig crossing it from side to side. The Blue Tit's eggs were laid in the back compartment, to which a little horsehair forming the sole lining had been added.

BLACKBIRD (*Turdus m. merula*).—On April 20th, 1922, I found a Blackbird's nest with four eggs, built in a disused Magpie's nest at Kenegie, near Penzance. The Magpie's nest was built against the bole of a cypress, and was about twenty feet above the ground. It had a few sticks of the dome remaining. The Blackbird had built a complete nest which was entirely below the rim of the Magpie's, and occupied a hollow, presumably formed by the bird, among the litter of cypress leaves and pine needles with which the Magpie's nest was half filled.

I watched a male Blackbird displaying in the Public Gardens, Penzance, on April 26th, 1924. The bird was on a path with a shrubbery on one side and a lawn on the other. He was running here and there on the path, but always kept within an area of a few yards. The feathers on the crown of the head were puffed up, the upper tail-coverts were raised straight above the back, and the tail was depressed. As he ran about erratically he poured out a constant stream of shrill piping notes from his wide-open bill. After I had watched for a few moments, a female Blackbird suddenly

ran out at him from the shrubbery, put him to flight and pursued him into another shrubbery close by.

ROBIN (*Erithacus rubecula melophilus*).—On May 5th, 1924, I found a Robin's nest with three eggs which were completely buried in the lining. The eggs were uncovered on May 8th, the day after the fifth and last egg had been laid. I can find no previous record of this habit in the case of the Robin.

SWIFT (*Apus a. apus*).—There was a pied variety at the Marazion Marsh, near Penzance, on May 14th, 1924, and I saw it again on May 15th and 16th. It had most of the upper tail-coverts and practically all the under tail-coverts white, and there were a few irregularly scattered white feathers on the lower breast and belly and on the mantle and back. The white upper tail-coverts were the only conspicuous part, the under tail-coverts hardly showing at all, unless the bird was directly overhead. The bird probably remained in the district as I saw a similarly marked bird at the same place on June 20th and 22nd.

MERLIN (*Falco columbarius aesalon*).—On December 22nd, 1923, I saw an adult male on a moor at Boswarva, near Penzance. At the same place on January 11th, 1924, I saw an adult male with what I presume was an adult female, as it appeared slightly larger than the male.

On the latter occasion I was fortunate enough to witness quite a battle between the female and a pair of Carrion-Crows. The Merlin was more than a match for both her antagonists. She would stoop fiercely at them making them scatter beneath her, shoot up at them from below with the momentum of her stoop, and then easily evade their clumsy attempts at retaliation. I never saw her actually strike either of the Crows, but several times one of them was forced to alight to escape a particularly vicious stoop. In the end she forced both Crows to the ground, and then flew off, accompanied by the male who had been perched on a stake near by the whole time, apparently quite content with the rôle of spectator.

GARGANEY (*Anas querquedula*).—As long ago as 1869 Rodd recognized the Garganey as an occasional spring passage migrant in West Cornwall. I saw a pair on the Marazion Marsh, near Penzance, on March 31st, 1924, and another pair on April 5th, 1924.

VELVET-SCOTER (*Oidemia f. fusca*).—I saw an adult male, in full plumage, at the back of Penzance railway station on March 26th, 1924. It was some distance from the shore, but I could see the white wing-bar and the white mark by the eye. The bird remained about the same place all that day,

but was gone by the 27th. This appears to be the sixth record for Cornwall, and the five previous records are also from the west.

CORMORANT (*Phalacrocorax c. carbo*).—There are only two colonies of this bird in the district, as far as I am aware, so that it is far outnumbered by the almost ubiquitous Shag. About ten pairs nest near Gwithian on the north coast in the Camborne district, and there is a larger colony of about fifty pairs on the Gull Rock at Mullion, on the eastern shore of Mount's Bay. At the former colony I saw a nest with two eggs as late as July 12th, 1924.

SHAG (*P. a. aristotelis*).—On June 7th, 1924, at the Land's End, I found a Shag brooding half-fledged young in a Raven's nest which I had seen occupied by the rightful owner on March 1st, 1924. A similar occurrence is recorded in *British Birds*, V., p. 27, also for Cornwall. As in that case, the Shag appeared to have made no addition to the Raven's nest.

On July 5th, 1924, at Porthleven, near Helston, I saw a brood of six young Shags, nearly fully-fledged, on one ledge. As they were all of the same size, and as there was only one nest on the small ledge, they were obviously all one brood.

RUFF (*Philomachus pugnax*).—A male in winter plumage frequented some marshy fields near Hayle, in company with a Green Sandpiper, from October 17th to 24th, 1923.

SPOTTED SANDPIPER (*Tringa macularia*).—On June 14th, 1924, while walking across Loe Bar (the large bank of shingle which separates Loe Pool, near Helston, from the sea), I saw what I supposed was a Common Sandpiper running along the shore of the lake. When I glanced at it from behind, through field-glasses, I saw it had small black spots on the white around its legs. This arousing my attention I got ahead of the bird, and, crouching down at the edge of the water, waited for it to come round a sand-spit. When it did so I saw that the throat and breast were profusely spotted, especially the latter. The big spots on the breast were in marked contrast to the much smaller ones lower down the body. The other differences between the Spotted and Common Sandpipers are of little use in the field, unless birds of both species are present for comparison, but I did notice that the base of the bill in this bird was a bright flesh-colour, different from the bill of any Common Sandpiper I have ever seen. The bird flew in the peculiar and characteristic manner of the Common Sandpiper, but uttered no note on rising. I have no hesitation in recording so rare a bird, as its being in summer plumage rendered identification certain.

BLACK-TAILED GODWIT (*Limosa l. limosa*).—There were two, both in summer plumage, at the Hayle estuary from May 6th to 9th, 1924.

LITTLE GULL (*Larus minutus*).—There was an immature bird in its first winter plumage at the Marazion Marsh on January 19th, 1924. It was associating with a flock of about one hundred and fifty Black-headed Gulls.

LESSER BLACK-BACKED GULL (*L. fuscus affinis*).—Rather less common as a breeding species than the Great Black-backed Gull, this bird only nests, as far as I know, in three localities in the district. There are five or six nesting among Herring Gulls at Gunwalloe, near Helston, and a few pairs nest near Gwithian and at Portreath, both near Camborne. I have found no colony between Penzance and St. Ives, and on June 14th, 1924, I found no nests on Mullion Island and saw but a single bird there. Clark (*Victoria History of Cornwall*, I., p. 346) gives Mullion Island as one of the chief breeding stations for this species.

GREAT BLACK-BACKED GULL (*L. marinus*).—This fine Gull is commoner as a breeding species in West Cornwall than is generally stated. Between Penzance and St. Ives I found twenty-six pairs nesting in the summer of 1924, and of these no less than twenty-two were in the Land's End district.

On the Enys Dodman, a flat-topped, soil-covered islet at the Land's End, there is a colony of sixteen pairs. The Black-backs have appropriated the whole of the top of this islet, but a few pairs of Herring-Gulls nest on its rocky sides. Of the remaining ten pairs, eight were on isolated, or semi-isolated, stacks, and two were on the mainland. Of the stack nests, only one pair held entire possession of its retreat. The others were all in company with Herring-Gulls, in one case with Shags, Razorbills and Guillemots also, and in another with Kittiwakes in addition. Usually, but not always, the Black-back's nest was at the top of the stack. The two mainland nests were on ledges among large colonies of Herring-Gulls. Outside the Penzance-St. Ives cliffs, a few pairs nest on the eastern shore of Mount's Bay, around Mullion, and there are one or two pairs nesting near Gwithian and at Portreath, both in the Camborne district.

On May 5th, 1923, I found a peculiar Great Black-backed Gull's egg in a nest with two normal eggs at Gurnard's Head, near St. Ives. It was a light sea-green in ground-colour with numerous faint purple shell-marks. It had one big brown blotch and a few small brown spots near the larger end. The egg lost its sea-green tint soon after blowing, and is now quite

normal in ground colour, while the purple shell-marks have disappeared.

KITTIWAKE (*Rissa t. tridactyla*).—On August 10th, 1923, I discovered a colony of Kittiwakes on a headland known as Carn Lês Boel, near the Land's End. There were then about eighty adult birds there, and a few young were still in the nests. On March 1st, 1924, a few birds were on the ledges, but I did not see the colony in full strength until June 7th, 1924. On that date I estimated there were about one hundred and fifty pairs breeding. The cliffs vary from one hundred to two hundred feet in height, and a huge detached slab of rock forms an island about one hundred and fifty feet high. The nests were on the face of the cliffs and the island, and in two large caves. A pair of Great Black-backed Gulls and many Herring-Gulls, nesting on the island, looked rather ominous for the young Kittiwakes, many of which were hatched on June 21st.

There are a few references in ornithological literature to what is probably this colony. Dresser (*Birds of Europe*, VIII., p. 448) was informed by the Rev. M. A. Mathew that "there is a large breeding station at Lundy Island, also on some of the granite cliffs near the Land's End, and at various other places on the southern coasts." D'Urban and Mathew (*Birds of Devon*, 2nd edition, p. 372) say "We are informed that a few nest on the cliffs of the Land's End," while in Kirkman's *British Bird Book* (Vol. 3, p. 113, foot note) it is stated that "possibly a few pairs still breed in Cornwall, near the Land's End."

This colony was evidently unknown to both Rodd and Clark. Rodd only mentions the former colony at Scilly, but, in the *Victoria History of Cornwall*, Clark says "Still nests but in diminishing numbers at Mullion Island, on the Gull Rock, Falmouth, and on a cliff on the south coast." There were no Kittiwakes on Mullion Island when I visited it on June 14th, 1924. The cliffs there are too small to have supported a large colony. A much more likely place would be the Mullion Gull Rock, but there were no Kittiwakes there either.

The other two breeding stations given by Dr. Clark still remain to be cleared up, namely, Gull Rock, Falmouth, and the "cliff on the south coast," which from Clark's introduction, appears to be in the Tamar-Fowey district.

I may mention that Lord Lilford, in his *British Birds* and in the *Birds of Northampton*, states that he found some nesting-stations on the south coast of Cornwall in 1852.

NOTES

THE TIME-PERIOD FOR NEST AND EGG REPLACEMENT.

MAJOR W. M. CONGREVE records (*antea*, p. 139) some observations on the above subject and as additional information, even if mainly corroborative, may be of interest, I give the following :—

MAGPIE (*Pica p. pica*).—Pair No. 1. The nest on April 17th held five eggs, fresh, which were taken that day. A second nest was built which held seven eggs on May 18th. Time-period was thirty-one days.

Pair No. 2.—On April 16th the nest held five eggs, fresh. These were found deserted on May 1st. A second nest was built and the clutch of six eggs was complete on May 25th. Time-period was at least twenty-four days.

Pair No. 3.—On April 29th the nest held four eggs, these were taken on May 1st. The second nest held four eggs on May 26th. Time-period was twenty-five days.

MISTLE-THRUSH (*Turdus v. viscivorus*).—A pair of Mistle-Thrushes nested in my grounds in 1924, but were unable to rear a brood until the third attempt. Their first nest was in an elder bush, the second in an elm tree twenty yards away, and the third in a yew tree midway between the two.

Nest 1.—Three young hatched on April 14th, but on the 17th they were dead, presumably killed by the previous night's frost.

Nest 2.—On April 27th the nest held two eggs, but the same day, about noon, a Rook was seen to eat them. Time-period until the 27th was ten days.

Nest 3.—There was one egg on May 7th, the clutch being laid by the 10th. Time-period was thirteen days.

I find that the Carrion-Crow (*Corvus c. corone*) and the Common Buzzard (*Buteo b. buteo*) do not always lay again if robbed of their first clutches.

R. H. BROWN.

THE INFLUENCE OF WEATHER UPON THE NUMBER OF EGGS IN A CLUTCH.

THE following observations appear to give evidence of the influence of climatic conditions upon the number of eggs laid in a clutch. Although there were no great snow-storms nor severe frosts in the south of England in the winter of 1923-1924 and the early spring of 1924, the weather inhibited

the growth of vegetation to a remarkable degree. The spring was the latest since 1917. In April in the district under consideration there was a serious shortage of pasture for cattle. Diminution of insect life was illustrated by the absence of the orchard and garden pests of the preceding years. Between April 13th and April 27th we had under observation four nests of the Woodlark (*Lullula a. arborea*), and three eggs were being incubated in each case. The third egg was observed to have been laid on April 13th in one nest; in the others it was calculated to have been laid on April 12th, 13th and 24th. Three of these nests were in small territories which had been occupied by pairs, presumably the same pairs, in previous years. Pair A was incubating a clutch of four eggs on April 8th, and again on June 2nd in 1923. Pair B had a clutch of four on April 11th, 1923, and a similar number, almost hatched, on May 7th, 1922. Pair C had a clutch of four on April 7th, 1923, four recently hatched young birds on May 7th, 1922, and four eggs on April 10th, 1921. Of four other nests observed in other territories in 1923 and 1922, two met with disaster after the laying of the first and third eggs on March 30th, 1923, and April 12th, 1923; two, which were incubated, contained respectively four eggs on April 22nd, 1923, and four nearly fledged young birds on June 4th, 1922.

A fifth nest was found this year, 1924, on June 1st, and contained four young birds. The eggs in this case were presumably laid not later than the first week of May. At the beginning of May vegetation had commenced to grow rapidly. Four full clutches, therefore, of eggs laid in the exceptionally sterile April of 1924 contained only three eggs, whilst four eggs was the number in a clutch laid later in the same year, and in all incubated clutches, to the number of nine, laid from March to June in 1921 to 1923, including seven clutches laid presumably by three of the four pairs observed in April 1924. The inhibition of vegetable and insect life would diminish the food supply of the Woodlarks. That this should cause a reduction in the number of eggs laid might be expected, in view of the remarkable increase which has been observed in the clutches of the Short-eared Owl during vole plagues.

E. C. A. BAKER.

HUBERT M. TURNBULL.

LATE NESTING OF THE GOLDFINCH.

ON September 7th, 1923, near Chichester, Sussex, I watched a pair of Goldfinches (*Carduelis c. britannica*) feeding nearly

full-fledged young in a nest thirty to forty feet up in a tree, and overhanging a main road, where motors were passing every few minutes. C. W. COLTHRUP.

[As the Goldfinch undoubtedly rears two or three broods in the season, it is not surprising to find young still in the nest late in the autumn. See *Zool.*, 1896, p. 61 (young fledged September 25th), etc. The latest date of which I am aware is that of three nearly fledged young in the nest on October 2nd, 1901 (Staffordshire).—F. C. R. JOURDAIN.]

SPOONBILL, BLACK TERN AND RAVENS IN HAMPSHIRE.

A SPOONBILL (*Platalea leucorodia*) was at Beaulieu at the end of July and the beginning of August, 1924.

A Black Tern (*Chlidonias niger*) was seen several times at the end of August and the beginning of September by Major C. Paddon.

Two Ravens (*Corvus corax*) have been frequently seen and heard around the marshes for over six weeks (end of August to early October) and have also been seen by Mr. Duplessis near Lymington. I don't remember ever hearing of any about Beaulieu before. THOMAS H. C. TROUBRIDGE.

PROTECTION OF THE LAPWING.

IN *British Birds*, Vol. XVIII., pp. 31-2, I invited answers (solely as regards the protection of the Lapwing in Great Britain) to the queries:—

- (1) Do you consider that if the taking of Lapwings' eggs were altogether prohibited the species would benefit?
- (2) Do you consider that the taking of Lapwings' eggs up to April 15th is detrimental, neutral, or beneficial to the species?

I have received in all fifty replies, but, as I understand that my queries were inserted in periodicals other than *British Birds*, I must take this opportunity of thanking all those who have been so obliging as to favour me with their views.

It was only to be expected that many of my correspondents could not content themselves by answering the queries without enlarging on them and this has made it somewhat difficult to summarize the replies. Two of my correspondents have so far allowed their feelings to run away with them that they have omitted to answer the queries and there are, therefore, forty-eight replies to be tabulated.

As regards query (1):—Twenty-eight indicate that if the taking of Lapwings' eggs was prohibited the species would benefit. Twenty express a contrary opinion.

As regards query (2) :—Twenty-four regard the taking of Lapwings' eggs up to April 15th as detrimental, nine as neutral, and fifteen as beneficial to the species.

I have already indicated that many of my correspondents have written to me at considerable length as to the protection of the Lapwing, but I feel that it would not be fair to those who have simply answered my queries to attempt to discuss the whole question on the evidence now before me. It may, however, be stated that it is apparent—from several letters which I have received—that during the last decade the Lapwing has generally decreased in Great Britain. One correspondent suggests that the severe winter of 1916–17 was the cause for this decrease, and he points out that as the reduction has been sudden it can not be due to the systematic taking of eggs, since by that process the decrease would have been gradual. A certain number of my correspondents (five to be exact) go out of their way to say that they think the shooting or killing of Lapwings should be prohibited. I consider it, however, as more worthy of note that eighteen of the replies which I have received strongly urge that it should not be legal to expose Lapwings' eggs for sale after the legalized close time (April 15th), or possibly a week after that date. However divergent may be the views of my fifty correspondents I believe that few, if any, of them would object if an Act was passed rendering it illegal to sell "Plovers' Eggs" after April 22nd. Legislation such as this would, I am confident (if a personal expression of opinion is permissible), offend nobody and would effectually further the protection of the Lapwing.

HUGH GLADSTONE.

GREY PLOVERS, LITTLE GULLS AND OTHER BIRDS NEAR READING.

ON September 21st, 1924, I visited the Reading Sewage Farm in company with Dr. Corbett. As we neared a mud flat a mixed assembly of birds rose, and I heard an unusual call from two birds. One of them settled again, and I identified it as an immature Grey Plover (*Squatarola squatarola*). We saw the second bird a few minutes later. It was an adult, the breast and forepart of the belly still being noticeably black. While in flight the black axillaries were easily distinguished. Subsequently I showed them to Dr. N. H. Joy. During years of watching around Reading, I have never seen a Grey Plover, though I have in other parts of England, and this seems to be the third record for Berkshire.

Three Little Gulls (*Larus minutus*) were seen at the same spot at the same time. This is the second year in succession that this species has been seen, though only one came last year. They were perpetually dipping to the surface of the water, though it is impossible to say on what they were feeding.

For the first time this autumn Curlew Sandpipers (*Calidris testacea*) put in an appearance, an unusually large flock of fourteen birds. They were tame, as usual. There were no Dunlins, or Greenshank, but we counted six Ringed Plover (*Charadrius hiaticula*), five Green Sandpipers (*Tringa ochropus*) and a solitary Common Sandpiper (*Tringa hypoleucos*).

H. P. O. CLEAVE.

RUFF IN ORKNEY.

ON August 30th, 1924, I received a bird from Mr. William Towers, Secretary to the Orkney Natural History Society, Stromness, for identification.

The specimen in question had been shot a few days previously by Mr. John Tait, at Dounby, near Kirkwall, Orkney, and was forwarded on by him to Mr. Marwick at Stromness, who in turn gave it to Mr. Towers.

The bird was much decomposed, so, as I was away, it was sent on to the British Museum (Natural History) and was identified by Mr. Wells as an adult female Ruff, or Reeve (*Philomachus pugnax*).

GEORGE C. LOW.

ACCURACY OF FLIGHT OF COCK CAPERCAILZIE.

DURING the last week of September, 1924, while I was motor-ing through a wood near Kingoldrum, Forfarshire, the car disturbed a cock Capercaillie (*Tetrao u. urogallus*) which flew across the road not far ahead. A wire fence bounded each side of the road, one being on a bank and several feet higher than the other. The bird cleared the low fence, but, instead of rising over the other, flew between the wires without touching. On measuring them I found that they were exactly nine inches apart.

T. LESLIE SMITH.

SANDWICH TERNS BREEDING IN SUFFOLK.—Mr. J. B. Watson reports (*Field*, 19.vi.1924, p. 876) that a small colony of Sandwich Terns (*Sterna s. sandvicensis*) nested in Suffolk in 1923, but did not return to nest in 1924.

ICELAND GULL IN SUMMER IN ARGYLLSHIRE.—Mr. H. M. S. Blair records (*Scot. Nat.*, 1924, p. 8) the occurrence of a

Larus glaucoides in Oban Harbour during the summer of 1922. Mr. Blair first saw it on June 28th, but was told that it had been there during the winter and spring. It was subsequently picked up in August with a broken wing and is now in the Royal Scottish Museum.

GREAT BUSTARD IN ORKNEY.—Mr. Hugh S. Gladstone records (*Scot. Nat.*, 1924, p. 89) that a Great Bustard (*Otis tarda*) was captured on Newark Farm (Sanday) on the night of January 4th, 1924. The bird was kept alive until February 20th, when it died. We understand that the skin has been preserved.

THE HOY COLLECTION OF BIRDS.—Mr. W. Pollitt informs us that the Southend-on-Sea Museum has recently acquired, by gift of Major Weber, the extensive collection of birds formed by J. D. Hoy (1797-1839). It consists of over 260 cases, many of the specimens having been taken in Essex, Suffolk and Norfolk. It is to be hoped that now the collection is available for public inspection all necessary steps will be taken to furnish as many of the specimens as possible with their essential particulars of sex, date and locality. No doubt a good deal might be done in this respect by means of Miller Christy's *Birds of Essex* and other notices of this old and valuable collection, even if no manuscript catalogue remains in existence.

REVIEW.

Lakeland Ornithology, 1892-1913, by Eric B. Dunlop. Appendix by L. E. Hope. *Transactions of the Carlisle Natural History Society*, Vol. III., 1923, pp. 1-39.

ALTHOUGH the late E. B. Dunlop's paper was read in 1913 it only now sees the light, since the publication of the *Transactions* of the Carlisle Society has been suspended since the war started. Dunlop's death in 1917 (he was killed in action) was certainly a great loss to ornithology, and these notes of his should be carefully studied by those interested in Lakeland. With Mr. Hope's Appendix they bring up to date the late H. A. Macpherson's well known *Fauna*. For the purpose of mere collation of records a district which includes parts of three counties (Cumberland, Westmorland and Lancashire) has its disadvantages, and in these papers matters are made still more difficult by the fact that very few references are given, so that it is a considerable task to discover if any particular fact has been published previously or not.

Among interesting items we note that the Pied Flycatcher continues to hold its own, that the Hawfinch and Great Spotted Woodpecker have greatly increased in recent years. There is an interesting account of a Common Buzzard, known for some eleven years to inhabit the fells near Windermere, which had the unusual habit of constantly swooping down and striking sheep, and occasionally also human beings. Two

Night Herons were obtained on the Eden, one on December 10th, 1903, and one three years previously. The changes in the status of the Grey Geese on the Solway during the last thirty years are interesting, the Pink-footed and the Grey Lag having each in turn become the commonest, while the Bean-Goose, which was the most numerous up to the date of Macpherson's *Fauna* (1892) is now very scarce. In Mr. Hope's Appendix we note that he includes the typical Goldfinch, but because flocks appear in winter this is no reason why they should be continental migrants. The Lesser Whitethroat is reported as nesting near Carlisle in 1920, 21 and 22, and at Ambleside since 1920. A warbler with a double wing-bar and a light eye-stripe seen on October 14th, 1920, at Skinburness, is entered as a Yellow-browed Warbler, but there are other species it might have been. The Green Woodpecker is stated to have first arrived in the Windermere district in 1919, but this has already been recorded as having probably taken place in 1918 (*Brit. B.*, XII., p. 141). A Red-breasted Goose is stated to have been seen by Mr. W. Nichol on Long Newton Marsh in November 1918. Several records (other than those already published in our pages) of the breeding of the Tufted Duck are given, but no reference is made to the fact that Sir Richard Graham had these birds hand-reared and kept them full winged (see *Brit. B.*, XVI., p. 135). The date of a Glossy Ibis shot at Moorhouse was given in *British Birds* (XV., p. 158) as October 19th, 1920, but Mr. L. E. Hope informs us (*in litt.*) that he has ascertained that the correct date is September 23rd, 1920 (not September 16th, 1921, as here printed). The Turtle-Dove has nested frequently near Carlisle in recent years (it had already been recorded in 1912) and in 1919 near Scotby.

It is as well to make here a correction of a record of a Roseate Tern in Cumberland (*Brit. B.*, XVI., p. 254). This being omitted from Mr. Hope's Appendix and finding on enquiry that the correct identification of the bird was doubted, we have by the courtesy of the owner, Mr. Moor Kitchen, and Mr. Hope, been enabled to examine the bird (or rather two, for it was doubtful which of two was referred to) and find that neither is a Roseate, one being an Arctic and the other a Common Tern, both in juvenile plumage.

H. F. W.

LETTER.

SONG-THRUSH AND OTHER BIRDS IMITATING WADERS AND OTHER BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the above (*antea*, pp. 62, 88, 117) I have records of the following:—

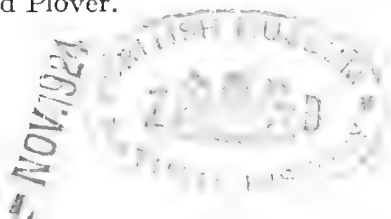
In 1922 we had a Blackbird in Dulwich which imitated the whistle of a Parrot a number of times, after which it continued with its normal song.

In the spring of 1923 a Song-Thrush in Surrey had some very rich notes, and imitated some of the notes of a Nightingale which was singing at the same spot.

In the spring of 1924, while in the company of Major Smeed, we noted a Blackbird imitating the notes of the Stone Curlew, which were breeding in the same neighbourhood.

It is quite common on the South Coast to hear the Skylark using the notes of the Ringed Plover.

C. W. COLTHRUP.



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THE GRASSHOLM GANNETS IN 1924—A GREAT INCREASE.

BY

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SINCE the late Mr. J. J. Neale relinquished the lease of Grassholm about ten years ago very little appears to have been recorded concerning the colony of Gannets (*Sula bassana*) inhabiting the island.

The late Mr. J. H. Gurney, in his book on *The Gannet* (1912), summarizes the previous records published in the *Transactions of the Cardiff Naturalists' Society** and elsewhere, and estimates that in 1903 at the time of his attempted visit (for he was unable to effect a landing owing to weather and could only sail round the island) there were about 400 birds, while Mr. Morley H. Neale informs us that up to 1914 there were not more than 300 pairs at any time.

Since Mr. Gurney wrote, as far as we can ascertain, no records have been published except an account of a visit by Captain Vivian Hewitt, in the *Oologists' Record* of December, 1923.

Captain Hewitt estimated that there were at the time of his visit, May 30th, 1922, 800 to 1,000 pairs breeding and the total number of Gannets about 3,000, but we were not aware of this record at the time of our visit.

Having these facts in mind we did not anticipate the sight which presented itself to our view on June 21st, 1924, as we reached the highest point and looked down on the dazzlingly white array of Gannets congregated on the north-west side of the island.

We had decided, before starting out, to try to get a record of the numbers as accurately as possible by means of photographs, so apart from any other exposures, a series was taken purely from the census point of view, and from this series we have selected five prints which, for convenient reference in this note, we have numbered 1 to 5.

Previously, the gannetry has usually been stated to consist of two or four separate small colonies, though Mr. Gurney, in the *Transactions of the Norfolk and Norwich Naturalists' Society* in 1903, says: "There is one place occupied by the largest company of Gannets which may well number a hundred or more, and further on are five smaller companies numbering

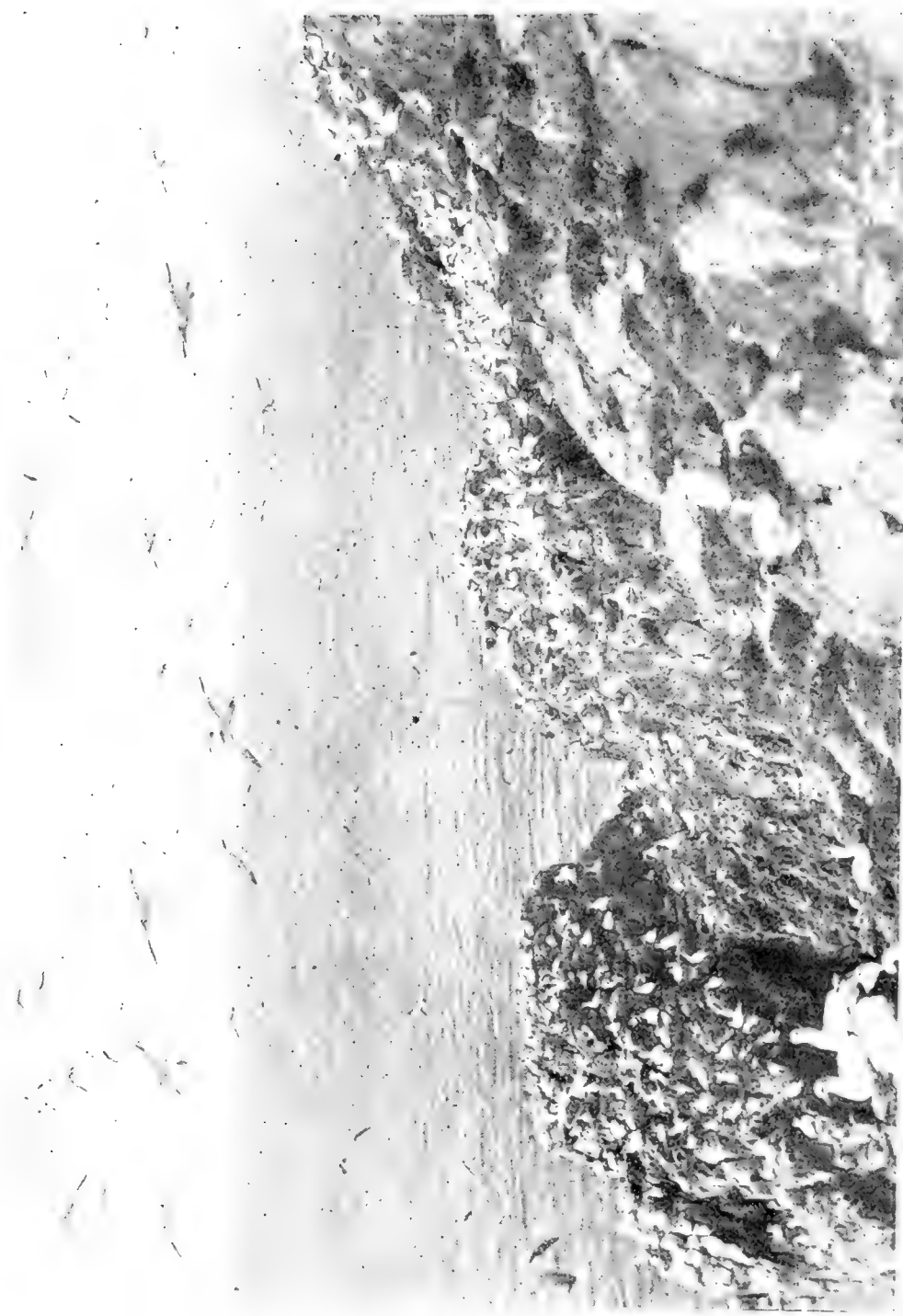
* Vol XXII., part II.; Vol. XXVI., part I.; Vol. XXXIII. and Vol. XXXVIII.



GANNETS AT GRASSHOLM IN 1924. No. 1. The south end of the colony.
(*Photographed by H. Morrey Salmon.*)

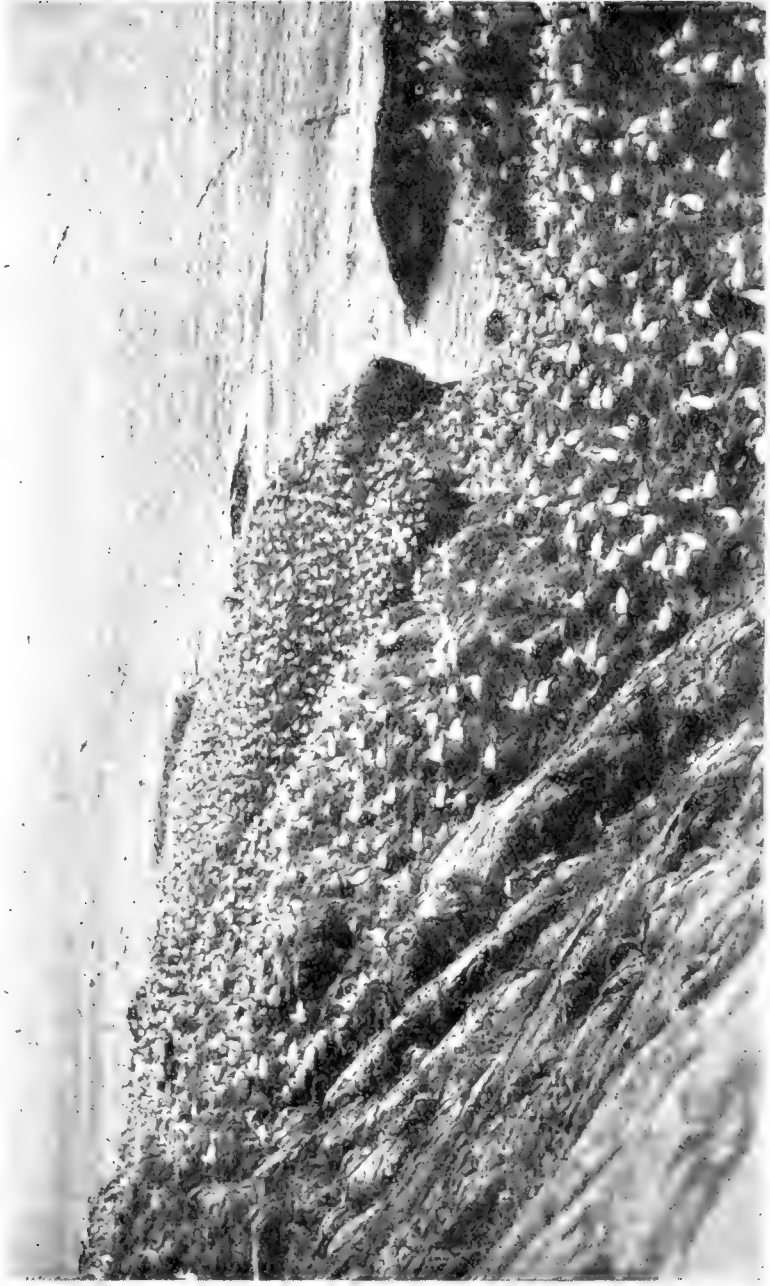


GANNETS AT GRASSHOLM IN 1924. No. 2. In the centre of the colony—some of the birds in flight.
(*Photographed by H. Morrey Salmon.*)



GANNETS AT GRASSHOLM IN 1924. No. 3. In the middle of the colony looking north.

(Photographed by H. Morrey Salmon.)



GANNETS AT GRASSHOLM IN 1924. No. 4. General view from the north end of the colony.
(*Photographed by H. Morrey Salmon.*)

say forty Gannets apiece on an average, as well as three or four yet smaller parties of eight or ten," but now these seem to be quite incorporated into one large unbroken colony which stretches along the north-west side of the island from just opposite the detached rock called West Tump to within about a hundred yards of the extreme northerly point of the island, or approximately opposite the letters "H.W.M.O.T." which appear on the 6 in. scale Ordnance Survey map—sheet Pembrokeshire, XXXI. A.S.W. and XXXI. C.S.E., second edn. 1909.



GANNETS AT GRASSHOLM IN 1924. No. 5. A few birds which could not be included on the extreme right of No. 4.

(*Photographed by H. Morrey Salmon.*)

A photograph (No. 1) was taken from the south, some distance from the edge of the breeding ground, showing comparatively a small section only, and two photographs were taken from a point well inside the colony, one (No. 2) showing about a third of the birds in flight and the other (No. 3) showing the centre section, if it may be so called, of the colony.

The large rock in No. 3 is that which was occupied by one of the two original small colonies, and it is interesting to

compare this photograph with the one of the same rock, taken in 1893, illustrating the paper on Grassholm in the *Trans. of the Cardiff Nat. Soc.*, Vol. XXVI.

The next (No. 4) was taken from almost the extreme north end of the colony, and a fifth (No. 5) taking in a few birds which could not be included in No. 4.

Of course, nothing less than an aerial view could possibly include every bird; many nesting on the sides of gullies, etc., cannot be seen in any general photograph taken from within the colony itself, and the reverse sides of the rocks in No. 3 do not appear in these photographs.

The method of assessing the numbers was to count all the adult birds *on the ground* in photographs 1, 3 and 4—for convenience these were marked off into inch squares on 8 in. by 6 in. prints—and taking a mean of three separate counts the figure arrived at was 1,930, to which must be added 90 birds appearing in No. 5. To this total we consider it reasonable to add 20 per cent. to account for the birds out of sight referred to in the previous paragraph.

This gives an estimated total of 2,420 birds actually at the nests, but as in a proportion of cases both birds of a pair were at the nest it may be assumed without exaggeration that there were 2,000 pairs breeding.

Calculating, however, on a minimum basis we get a total of over 1,800 pairs if only 50 per cent. be added to the 2,420 on the breeding area to allow for birds away fishing, and those in flight over the colony.

The latter were approximately 900, as we found that the plate took in about a third of them, and the three photographs 1, 2 and 3 show an average of 300 birds in flight each. Mr. Gurney, on his visit in 1903, remarks that he did not see above 60, if as many, on the wing in the neighbourhood of Grassholm.

Incidentally, it may be mentioned that Puffins, once so extremely numerous, have apparently now almost deserted Grassholm.

Even at this late date a number of Gannets were bringing materials to the nest, and on more than one occasion a bird in immature plumage, probably about the fourth year, was seen carrying a long streamer of seaweed in its beak.

The nests were the usual collection of seaweeds, tufts of grass and thrift, feathers, etc., and were built, as can be seen in the photographs, in all situations from the grass-covered earth slopes down to the ledges of the cliffs.

The majority of them contained young in various stages, though there were a few eggs, mostly well incubated, which

had a peculiarly pungent peppery-fishy odour. The gulls took some, though apparently fresh ones only, judging by the few empty shells we saw.

It was unfortunate that the weather was responsible for giving us so short a time ashore, but we could not stay longer and risk being marooned for an indefinite time; as it was, from the time of our first embarkation at 1.30 a.m., from which, after a couple of hours, the weather forced us to put back and make a second start at 10.30 a.m., to finally reaching the mainland on our return at 10.30 p.m., we spent eleven and a half hours in the boat.

RECOVERY OF MARKED BIRDS.

- STARLING (*Sturnus v. vulgaris*).—96,251, ringed at Rosehill, Cheadle, Staffs, as a nestling, by Mr. J. R. B. Masefield, on May 26th, 1920. Reported where ringed, on December 29th, 1922, and March 21st, 1924, by the ringer.
- 50,396, ringed at Eton, Bucks, by Mr. A. Mayall, on November 11th, 1921. Reported where ringed, on January 11th, 1924, by the ringer, and bird released.
- 55,831, ringed as 50,396, on October 26th, 1922. Reported where ringed, in April 1924, by Miss E. Boyd.
- 56,397, ringed as 50,396, on November 14th, 1922. Reported at Addlestone, Surrey, on September 18th, 1924, by Mr. G. Bentley.
- 56,425, ringed as 50,396, on November 17th, 1922. Reported at Hampton Court, Surrey, on April 30th, 1924, by Mr. H. Slade.
- 56,481, ringed as 50,396, on January 1st, 1923. Reported where ringed, on April 29th, 1924, by Mr. W. A. Bennett.
- Z.1,439 and Z.2,691 ringed as 50,396, on August 26th and 30th, 1923. Reported where ringed, on January 20th and 3rd, 1924, by the ringer, and birds released.
- Z.1,360, ringed at Earley, Berks, as a nestling, by Mr. A. Mayall, on May 26th, 1924. Reported at Croxley Green, Herts (25 miles from where ringed), on July 22nd, 1924, by Mr. W. Simmonds.
- 59,228, ringed at Scaford, Sussex, as a young bird, by Mr. J. F. Thomas, on May 30th, 1923. Reported where ringed, on March 24th, 1924, by Mr. H. J. Baskett.
- 54,070, ringed at Ashby Magna, Leicestershire, as a young bird, by Lieut. H. B. Cott, on May 31st, 1922. Reported where ringed, on April 21st, 1924, by Mr. W. H. Shepard.
- 51,901, ringed at Bradfield, near Reading, Berks, by Dr. N. H. Joy, on November 27th, 1922. Reported near where ringed in May, 1924, by Mr. P. F. Bailey.
- 54,976, 54,977, ringed at Frandley, near Great Budworth, Cheshire, by Capt. A. W. Boyd, on January 26th and 30th, 1923. Reported where ringed, on November 29th and 27th, 1923, by the ringer.
- 57,675, ringed as 54,976, a nestling, on July 10th, 1923. Reported where ringed, on March 26th, 1924, by the ringer.
- GREENFINCH (*Chloris c. chloris*).—A.7,465, ringed at Wood End, Pyrford, Surrey, as a nestling, by Mrs. L. E. Taylor, on May 26th, 1923. Reported at West Byfleet, Surrey, in June 1924, by the ringer.
- LINNET (*Carduelis c. cannabina*).—A.9,607, ringed at Burnham, Bucks, as a nestling, by Mr. A. Mayall, on July 15th, 1923. Reported at Capbreton-sur-Mer (Landes), France, on November 20th, 1923, by Mons. C. Lafitte.
- CHAFFINCH (*Fringilla c. caelebs*).—2,084, ringed at Rosehill, Cheadle, Staffs, as an adult, by Mr. J. R. B. Masefield, on August 12th, 1921. Reported where ringed, on March 5th, 1924, by the ringer. Re-ringed with B.2,109.
- A.5,846, A.5,855, ringed at Bridge-of-Earn, Perthshire, as adults, by Mr. A. H. R. Wilson, on July 4th, 1923. Reported where ringed, on March 12th, 1924, by the ringer. Rings replaced and birds released.
- B.2,613, ringed at Pyrford, Surrey, as an adult female, by Mrs. L. E. Taylor, on October 26th, 1923. Reported where ringed, on February 12th, 1924, by the ringer.
- A.2,009, ringed near Great Budworth, Cheshire, as an adult, by Capt. A. W. Boyd, on February 12th, 1923. Reported where ringed, on November 26th, 1923, by the ringer.

A.2,018, ringed as A.2,009, on February 16th, 1923. Reported where ringed five times during March, and twice during December, 1923, by the ringer.

A.2,043, ringed as A.2,009, on March 8th, 1923. Reported where ringed on December 4th, 1923, and January 28th, 1924, by the ringer.

YELLOW BUNTING (*Emberiza c. citrinella*).—A.2,008, ringed near Great Budworth, Cheshire, as an adult, on February 8th, 1923, by Capt. A. W. Boyd. Reported where ringed, on February 9th, 1924, by the ringer.

A.2,019, ringed as A.2,008, on February 16th, 1923. Reported where ringed on January 27th, 1924, by the ringer.

A.9,297, ringed as A.2,008, on January 31st, 1924. Reported at Runcorn Water Works, Cheshire, late July 1924, by Mr. H. Norman.

WOOD-WARBLER (*Phylloscopus s. sibilatrix*).—B.7,254, ringed at Burnham, Bucks, as a nestling, by Mr. A. Mayall, on June 12th, 1924. Reported near Potenza, Southern Italy, on September 23rd, 1924, by Count E. Arrigoni Degli Oddi. Published in *Il Cacciatore Italiano*, XXXVIII., No. 40, p. 654.

PIED WAGTAIL (*Motacilla a. yarvelli*).—B.1,828, ringed at Eton, Bucks, as an adult, by Mr. A. Mayall, on August 28th, 1923. Reported where ringed, on April 17th, 1924, by the ringer.

SONG-THRUSH (*Turdus ph. clarkei*).—57,659, ringed at Great Budworth, Cheshire, as a nestling, by Capt. A. W. Boyd, on June 22nd, 1923. Reported near where ringed, on April 6th, 1924, by Mrs. Houghton, per the ringer.

52,133, ringed at Kessingland, Lowestoft, Suffolk, as a young bird, by Miss F. K. Staunton, on May 2nd, 1923. Reported at Oulton Broad, near Lowestoft, on December 8th, 1923, by Mr. J. T. Hawkes.

BLACKBIRD (*Turdus m. merula*).—96,906, ringed at Streatham, London, S.W., as a nestling, by Mr. F. J. Mitchell, on May 5th, 1921. Reported where ringed, on June 25th, 1924, by Mrs. C. Norman. T.866, ringed at Torrance, Stirlingshire, as a nestling, by Mr. J. Bartholomew, on May 4th, 1914. Reported where ringed, in May 1924, by the ringer. Shrivelled body of bird found.

A.5,519, ringed as T.866, on May 17th, 1923. Reported where ringed, on April 14th, 1924, by the ringer.

58,841, ringed as T.866, on June 1st, 1923. Reported at Milngavie, Stirlingshire, on August 25th, 1924, by Mr. H. D. Jackson.

59,344, ringed at Helensborough, Dumbartonshire, as a nestling, by Mr. T. Kerr, on May 17th, 1923. Reported where ringed, on February 26th, 1924, by Miss M. MacBrayne.

56,255, ringed at Formby, Lancs, as a nestling, by Mr. T. L. S. Dooly, on May 21st, 1923. Reported where ringed, in July 1924, by Mr. T. Kiely.

52,375, ringed at Rusland, Ulverston, Lancs, as a nestling, by Mr. C. F. Archibald, on May 11th, 1924. Reported at Troutbeck, Windermere (about 8½ miles from where ringed), in August 1924, by Mr. A. Sisson.

WHEATEAR (*Ænanthe æ. ænanthe*).—A.2,900, ringed at Seaford, Sussex, as a nestling, by Mr. J. F. Thomas, on May 17th, 1923. Reported 1½ miles from where ringed, on May 11th, 1924, by the ringer. A female caught sitting on eggs.

REDBREAST (*Erithacus r. melophilus*).—GY.17, ringed at Limpsfield, Surrey, as an adult, by Mrs. A. Patteson, on September 29th, 1919. Reported where ringed, in February 1924, by the ringer.

P.W.34, ringed at Streatham, London, S.W., as an adult, by Mr. F. J. Mitchell, on October 2nd, 1921. Reported where ringed, on October 22nd, 1921, June 24th, 1922, September 4th (Re-ringed A.8,203) and October 18th, 1923. Again released.

4,952, ringed at Woodside, Pyrford, Surrey, as an adult, by Mrs. L. E. Taylor, on October 1st, 1921. Reported where ringed, on April 10th, 1924, by the ringer. Re-ringed with B.2,596.

4,967, ringed as 4,952, on April 8th, 1922. Reported where ringed, on April 16th, 1924, by the ringer.

A.3,582, ringed as 4,952, on February 26th, 1923. Reported where ringed, on September 19th, 1923, and May 28th, 1924, by the ringer.

8,121, ringed at Patterdale, Ullswater, Westmorland, as a young bird, by Dr. H. J. Moon, in May 1922. Reported where ringed, on April 28th, 1924, by Mr. J. Sweeten per the ringer.

A.3,839, ringed at Bridge-of-Earn, Perthshire, as an adult, by Mr. A. H. R. Wilson, on April 8th, 1923. Reported where ringed, on February 8th and 17th, 1924, by the ringer. Again released.

A.3,832, ringed as A.3,839, on July 5th, 1923. Reported where ringed, on October 12th, 15th and 19th, 1923, and February 19th, 1924, by the ringer. Again released.

A.1,803, ringed at Rosehill, Cheadle, Staffs, as an adult, by Mr. J. R. B. Masefield, on November 27th, 1922. Reported where ringed, on November 25th, 1923, and March 3rd, 1924. Again released.

B.2,078, ringed at Eton, Bucks, as an adult, by Mr. A. Mayall, on September 14th, 1923. Reported where ringed on February 10th, 1924, by the ringer.

A.1,999, near Great Budworth, Cheshire, as an adult, by Capt. A. W. Boyd, on January 26th, 1923. Reported where ringed in February and July, 1923, and January and February, 1924, by the ringer.

A.2,006, ringed as A.1,999, on February 3rd, 1923. Reported where ringed, six times during February, March and November, 1923, and twice in January, 1924, by the ringer.

A.2,023, ringed as A.1,999, on February 24th, 1923. Reported where ringed several times between October, 1923, and January, 1924, by the ringer.

A.9,211, ringed as A.1,999, on August 5th, 1923. Reported where ringed seven times during September, October and November, 1923, and five times during January and February, 1924.

5,452, ringed at Laugharne, Carmarthenshire, as a bird of the year, by Mr. J. F. Thomas, on August 9th, 1922. Reported where ringed, on August 13th, 1923, and January 9th, 1924, by the ringer.

A.8,402, ringed at Salcombe Regis, near Sidmouth, Devon, as an adult, by Mr. P. E. A. Morshead, on August 25th, 1923. Reported where ringed, on December 28th, 1923, by the ringer. Ring replaced and bird released.

HEDGE-SPARROW (*Prunella m. occidentalis*).—NV.51, ringed at Frandley, near Great Budworth, Cheshire, as a nestling, by Capt. A. W. Boyd, on May 29th, 1921. Reported near where ringed, on May 9th, 1924, by the ringer.

A.2,001, ringed as N.V.51, on January 26th, 1923. Reported where ringed, on September 28th, 1923, by the ringer.

A.4,549, ringed as NV.51, an adult, on July 28th, 1923. Reported where ringed eight times during July and August, and on October 21st and November 6th, 1923, by the ringer.

A.5,849, ringed at Bridge-of-Earn, Perthshire, as an adult, by Mr. A. H. R. Wilson, on August 5th, 1923. Reported where ringed, on November 22nd and December 11th, 1923, and February 20th, 1924. Again released.

A.8,204, ringed at Streatham, London, S.W., as an adult, by Mr. F. J. Mitchell, on September 4th, 1923. Reported where ringed, on January 27th, 1924, by the ringer. Again released.

B.2,611, ringed at Pyrford Heath, near Woking, Surrey, as an adult, by Mrs. L. E. Taylor, on October 1st, 1923. Reported where ringed several times during October, November and December, 1923, and on March 30th, 1924, by the ringer.

SWALLOW (*Hirundo r. rustica*).—A.5,398, ringed at Kessingland, Lowestoft, Suffolk, as a young bird, by Miss F. K. Staunton, on June 26th, 1923. Reported at Commune d'Eyrans, near Blaye (Gironde), France, on September 12th, 1923, by Mons. A. Chabiron. 9,417, ringed at Dorney, Bucks, as a nestling, by Mr. A. Mayall on June 25th, 1923. Reported near where ringed, late June 1924, by Mr. H. R. Cripps.

B.1,206, ringed at Torrance, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on July 24th, 1923. Reported near where ringed, on July 3rd, 1924, by Mr. J. Simpson.

A.6,107, ringed at Laugharne, Carmarthenshire, as a nestling, by Mr. J. F. Thomas, on August 17th, 1923. Reported at Carmarthen, early July 1924, by Mr. Wm. Narbett.

MARTIN (*Delichon u. urbica*).—B.4,517, ringed at Glen Esk, Forfarshire, as a young bird, by Mr. H. G. Watson, on July 6th, 1924. Reported at East Mill, Bleachfield (about 15 miles distant), early September, 1924, by the ringer. Published in *Dundee Advertiser*, September 9th, 1924.

SWIFT (*Apus a. apus*).—53,940, ringed at Warlingham, Surrey, a nesting bird, by the Lon. Nat. Hist. Soc., on July 23rd, 1922. Returned to nest in same roof in 1923, reported by Mr. A. Beadell. Ring replaced.

PEREGRINE FALCON (*Falco p. peregrinus*).—102,603, ringed in Westmorland, as a young bird, by Dr. H. J. Moon, on May 29th, 1923. Reported about 5 miles from eyrie where ringed, on May 5th, 1924, by the ringer. Bird found dead below nest which contained broken egg. Probably it was owner of nest, but may have been loser in fight with real owner.

MERLIN (*Falco c. aesalon*).—26,349, ringed at Merthyr Mawr, S. Wales, as a nestling, by Miss C. M. Acland, on June 19th, 1921. Reported near Bridgend, Glamorgan, S. Wales, in March 1924, by Mr. Wm. David.

SPARROW-HAWK (*Accipiter n. nisus*).—73,570, ringed at Bradfield, near Reading, Berks, as a nestling, by Dr. N. H. Joy, on June 23rd, 1923. Reported near where ringed early May 1924, by Mr. A. J. Cox.

21,358, ringed at Graigallian, Dumbartonshire, as a young bird, by Mr. D. Macdonald, on June 23rd, 1923. Reported at Duntreath Estate, Blanefield, Stirlingshire, early July 1924, by Mr. R. N. Morrison.

MALLARD (*Anas p. platyrhyncha*).—Eight ringed at Oakmere, Cheshire, by Capt. A. W. Boyd, on July 16th, and three on the 23rd, 1923 (hand-reared birds), were shot at the same place in December 1923.

37,395, ringed at Leswalt, Stranraer, Wigtownshire, as an adult, by Mr. M. Portal, on February 21st, 1922. Reported where ringed, on February 27th, 1924, by the ringer.

20,509, ringed as 37,395, on March 5th, 1924. Reported at

- Culhorn Loch, about 5 miles from where ringed, on August 16th, 1924, by Mr. Wm. Watt, per *The Field*.
- SHAG (*Phalacrocorax a. aristotelis*).—102,848, ringed on Handa Island, Sutherland, as an adult, by Capt. A. W. Boyd, on June 29th, 1923. Reported where ringed, in May 1924, by Mr. J. Hunter.
102,871, ringed on Soyca Island, Lochinver, Sutherland, as a nestling, by Capt. A. W. Boyd, on July 6th, 1923. Reported at mouth of Loch Torridon, Ross-shire, early May 1924, by Mr. J. Macdonald.
50,545, ringed at Scilly Isles, Cornwall, as a young bird, by Mr. H. W. Robinson, on June 25th, 1924. Reported near St. Sampson's, Guernsey, on September 18th, 1924, by Mr. W. J. Galpin.
- WOOD-PIGEON (*Columba p. palumbus*).—68,801, ringed at Cholsey, Berks, as a young bird, by Mr. J. F. Madden, on June 9th, 1923. Reported near Wallingford, Berks, on June 5th, 1924, by Miss N. H. Greg.
- LAPWING (*Vanellus vanellus*).—47,135, ringed at Louth, Lincs, as an adult, by Mr. J. S. Allison, on February 11th, 1915. Reported at Dipple Farm, Woolsey West, Bucks Cross, N. Devon, in February 1924, by Mr. G. Andrew.
58,890, ringed at Torrance, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on June 9th, 1923. Reported near where ringed on March 18th, 1924, by the ringer.
58,891, ringed as 58,890. Reported at Barefield, co. Clare, Ireland, on February 25th, 1924, by Mr. P. Galvin.
58,836, ringed as 58,890, on June 23rd, 1923. Ring reported at Strathblane, Stirlingshire, on May 4th, 1924, by Mr. J. Griffiths. Ring found in a fresh "casting" in a Kestrel's nest; Kestrel seen. No remains of Lapwing found.
- CURLEW (*Numenius a. arquata*).—20,829, ringed at Torrance, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on July 2nd, 1923. Reported at Dundalk, co. Louth, Ireland, on February 26th, 1924, by Mr. J. Ohagan.
- SNIPE (*Capella g. gallinago*).—B.2,158, B.2,159, ringed on the Isle of Arran, Scotland, as young birds, by Mr. J. R. B. Masefield, on June 10th, 1924. Reported where ringed on August 23rd and 16th, 1924, by Mr. S. D. Whitehead, per *The Field*, and Mr. I. Kerr.
Y.1,018, ringed at N. Hareshaw, Ayrshire, as a young bird, by Mr. E. Richmond Paton, in July 1924. Reported one mile from nesting place, on September 20th, 1924, by the ringer.
- SANDWICH TERN (*Sterna s. sandvicensis*).—56,187, ringed on Walney Island, N. Lancs, as a young bird, by Mr. H. W. Robinson, on June 18th, 1923. Reported at Mossamedes, Angola, Portuguese West Africa, on May 18th, 1924, by Mr. R. V. Middleton.
- COMMON TERN (*Sterna h. hirundo*).—2,502, ringed at Ainsdale, Lancs, as a nestling, by Mr. F. W. Holder, on June 14th, 1921. Reported on the Dee Marshes, Cheshire, on August 2nd, 1924, by Mr. S. Field.
- COMMON GULL (*Larus c. canus*).—74,825, ringed at Ardnamurchan, Argyllshire, as a young bird, by Mr. T. Kerr, on July 1st, 1924. Reported near Tralee, co. Kerry, Ireland, on August 28th, 1924, by Mr. E. J. Reidy.
- LESSER BLACK-BACKED GULL (*Larus f. affinis*).—39,096, ringed at Foulshaw, Westmorland, as a young bird, by Mr. H. W. Robinson, on July 30th, 1920. Reported at Marennes (Charente Inférieure), France, on August 13th, 1923, by Dr. Hagge, per Dr. H. Weigold. Published in *St. Hubert Club Illustré*.

21,063, ringed as 39,096, on July 24th, 1922. Reported on Leckie Estate, Gargunnoch, Stirlingshire, on May 24th, 1924, by Mr. J. Burgess.

21,094, ringed as 39,096, on July 24th, 1922. Reported near Seaton Carew, West Hartlepool, on September 1st, 1924, by Mr. R. H. Lofthouse.

21,220, ringed as 39,096, on July 18th, 1923. Reported near Ile aux Moines (Morbihan), France, on July 30th, 1924, by Mons. J. Gascon.

GUILLEMOT (*Uria a. albionis*).—21,378, ringed at Ailsa Craig, Ayrshire, as a young bird, by Mr. D. Macdonald, on July 8th, 1923. Reported at mouth of Loch Striven, Firth of Clyde, on March 18th, 1924, by Mr. A. Jeffrey.

MARKED ABROAD AND RECOVERED IN GREAT BRITAIN.

LAPWING (*Vanellus vanellus*).—H. Pedersen, Fr-Sund, Danmark, 40,041, ringed as a young bird on a small island in the Firth of Roskilde, Sjaeland, Denmark, on May 23rd, 1923. Reported at Pyrehill, near Stone, Staffordshire, on November 15th, 1923, by Mr. J. R. B. Masefield.

BLACK-HEADED GULL (*Larus r. ridibundus*).—Museum, Leiden, 34,490, ringed as a nestling, at Leersum, Prov. Utrecht, Holland, on June 10th, 1923. Reported in Thames Estuary, in February, 1924, by Mr. S. Westfield.

P. Skovgaard, Viborg, V.1419, ringed at Klagbanken, Ringkjøbing, Jutland, Denmark, on June 9th, 1923. Reported at Cliffe-at-Hoo, Rochester, on April 14th, 1924, by Mr. G. J. Scholey.

P. Skovgaard, Viborg, 459, ringed at Aggersborggaard, north of Logstor, Jutland, Denmark, on June 26th, 1918. Reported at Allerton Bywater, Yorks, on March 4th, 1920, by Mr. E. Atkinson. (See *Danske Fugle*, 1923, p. 157.)

P. Skovgaard, Viborg, 315, ringed as 459. Reported at Eastwear Bay, Folkestone, Kent, on August 6th, 1920, by Mr. A. M. Browne-Anderson. (See *Danske Fugle*, 1923, p. 157.)

P. Skovgaard, Viborg, 532, ringed as 459. Reported in the Wash, Lincs, on February 14th, 1922, by Mr. H. A. Atkinson. (See *Danske Fugle*, 1923, p. 158.)

P. Skovgaard, Viborg, 523, ringed at Mellempoldene, Randers Fjord, Jutland, Denmark, on July 17th, 1919. Reported on bank of the Humber, Hull, Yorks, on November 16th, 1919, by Mr. O. Parkinson. (See *Danske Fugle*, 1923, p. 159.)

P. Skovgaard, Viborg, 873, ringed at Madstedborg i Ove So, on June 25th, 1920. Reported at Greatham Creek, Durham, on November 11th, 1920, by Mr. T. Thomsen. (See *Danske Fugle*, 1923, p. 163.)

P. Skovgaard, Viborg, 810, ringed as 873. Reported at Brightlingsea, Essex, on December 20th, 1921, by Mr. A. R. Pawle. (See *Danske Fugle*, 1923, p. 163.)

P. Skovgaard, Viborg, N. 23, ringed at Tipperne, on June 29th, 1920. Reported at Rye, Sussex, in April 1921, by Mr. E. P. S. Jones. (See *Danske Fugle*, 1923, p. 163.)

P. Skovgaard, Viborg, 1,267, ringed at Oxneholm, Roskilde Fjord, Sjaeland, Denmark, on June 30th, 1921. Reported at Gower, Glamorgan, S. Wales, on November 18th, 1921, by Mr. D. S. Morris. (See *Danske Fugle*, 1923, p. 166.)

COMMON GULL (*Larus c. canus*).—P. Skovgaard, Viborg, X.2,574, ringed on Saltholm, S.E. of Copenhagen, Denmark, in 1923. Reported at Kelsale, Norfolk, on February 7th, 1924, by Mr. J. O. Sells. Released still bearing ring.

NOTES

WOOD-LARK BREEDING IN EAST SURREY.

ON June 9th, 1923, on a heath in East Surrey, which I am certain is not the same as that referred to by Mr. Bunyard (Vol. XVII., p. 198), my attention was attracted by a bird which I made out to be a Wood-Lark (*Lullula a. arborea*). I jotted down some of the notes, which sounded like "eedle-ceedle-eep," varied by "midear—midear" repeated very sweetly several times. It kept soaring over one spot, and sang twice with an interval of ten minutes.

Later, I searched the spot and put up the pair of birds, but failed to find a nest. The bird was still singing on June 30th.

On March 15th, 1924, I again visited the heath. The weather for fourteen days had been very cold with a N.E. wind with cloudless skies for some days. When I reached the heath the sun was partly obscured by mist, but when the sun at last came out, a Wood-Lark rose from some fir trees, circled high in the air singing, and as it returned to the fir trees flew up to what looked like another pair of Wood-Larks that flew over the trees with a drooping flight. A systematic search failed to reveal a nest.

On April 5th, 1924, I again visited the heath with more success. The sky was cloudless with a very cold E. wind. After a lengthy search of the heath I walked over to some birches and heard a Wood-Lark singing in a subdued tone some distance off in a fir tree. On approaching the spot I was trailing a stick by my side, when I felt a flutter of wings between the stick and my leg, as the bird flew a short distance and settled in the heather. Looking down I discovered a nest with three typical Wood-Lark eggs. The bird sat so tight that I am quite sure, had it not been for the stick, it would have allowed me to pass without moving, as the stick was behind me. Two days afterwards there were still only three eggs.

I visited the heath on a number of occasions afterwards when the male only sang for short intervals, and on June 7th I disturbed both parents with four fully-fledged young, feeding in the heather. One parent flew with the young a short distance, while the other remained quite close to me, apparently feeding quite unconcernedly, and I had a good view of it. The male was singing well on the 13th, 14th and 15th June, generally from seven to ten minutes at a time, but on the

latter date I found the male already singing in bright sunshine, and it continued for another thirty-nine minutes, when it descended to the ground. It was up again after a five minutes' interval and continued singing when I left it. It appeared to me rather agitated, due, I think, to people sitting about on the heath, probably near the female sitting on a third nest.

C. W. COLTHRUP.

BLACK REDSTART INLAND IN KENT.

ON October 20th, 1924, a Black Redstart (*Phœnicurus ochrurus gibraltariensis*) frequented my garden in Maidstone; it was first seen about 2 p.m., and I watched it until nearly dusk. It spent most of the time on the roof of the house, from which it made short flights after passing insects, but occasionally came down to the ground. I kept a good look out for it on the following days, but did not see it again until the 23rd, when it was again back on the house for some time. Since then I have not seen it.

W. WOOD.

HOW LATE DO SWIFTS STAY OUT AT NIGHT?

IN 1924 I have had some experience with Swifts (*Apus a. apus*) slightly similar to that which Mr. Hamilton had in 1923 (Vol. XVII., p. 110). I ringed fifty Swifts, all but seven in nests in the thatch of cottages near Tisbury, Wilts. On July 30th, 1924, I thoroughly searched the thatch at one side of a cottage and ringed two young and one adult. The next evening at 10 p.m., a dark night, I examined all the nests again, taking an hour over it. I ringed nine young Swifts and found again the two with rings on, but did not find a single adult. I was fortunately able to see clearly that they were all young, as I had the strong electric lamp of a car close by. I did not see an adult leave a nest, nor was one reported to me by several bystanders. Three or four of the young birds flew out directly I put them back in the nests. Not liking this I took four of them home and put them in a cupboard for the night, and let them go in the morning, three miles away.

It is quite evident that the adults were still out, as I feel sure that they would have been in their nests with their young, and not over the top of a ceiling, where they might have got to in two places. Of course I felt in as far as I could in these places.

While on the subject of Swifts, is it known where they roost in South Africa and Madagascar (*Prac. Handb.*, II., p. 7)? It also makes one wonder where they roost on migration,

because, of course, they have to have very special places for roosting. Do they roost with Alpine Swifts (*A. m. melba*) in North Africa? Do they fly night and day for several days? A physical impossibility one would think, but is it? Their wonderful flight is done with very slight strokes of the wings, and after all in nature examples of nearly perpetual muscular motion do occur. Leaving out the heart beat, etc., does not this occur in a fish in a swift running stream? It has to keep its fins constantly on the move and nearly its whole body working its tail, even when hiding behind a rock, as here it has to contend with the back current. NORMAN H. JOY.

BUZZARDS OVER THE ISLE OF WIGHT.

ON September 10th, 1924, I watched three Common Buzzards (*Buteo buteo*) soaring in circles at a great height over Sandown, Isle of Wight. They came in from the sea, and were evidently migrating, travelling east to west. C. W. COLTHRUP.

SPOONBILLS IN KENT.

ON August 17th, 1924, my husband and I were hiding behind the sea-wall on the east point of the Isle of Sheppey, waiting for ducks to flight over, when three Spoonbills (*Platalea leucorodia*) got up off the mud on the margin of the Swale and flew over our heads. They were about sixty yards up. They settled again on the mud and we had a long look at them through glasses. The long, thin, outstretched neck in flight, the characteristically shaped bill and the long feathers about the head were well seen, and though I had never seen Spoonbills before I have no doubt as to their identity. V. R. M. GOWLLAND.

GOLDENEYES IN CHESHIRE THROUGHOUT SUMMER.

EXCEPT for crippled birds, Goldeneyes (*Bucephala c. clangula*) have not, so far as I am aware, been known to summer in Cheshire before this year (1924).

On Marbury Mere, near Northwich,—a favourite water for this species—they rarely stay later than the last few weeks of April (though single birds linger till May) and they usually reappear in October.

This year, however, on May 3rd, there were still nine birds on the mere, which by May 20th were reduced to five; of these five two were adult drakes with *brown* heads and white facial spots—a state of plumage shown by a drake on April 26th, and in 1923 as early as March 17th.

From the end of May till the end of October from two to four were almost always to be seen and Mr. J. Moore, who frequently visits the mere, tells me that he does not remember to have seen less than two Goldeneyes on any occasion throughout the summer.

One was, in all probability, a cripple that was present through the previous summer and possibly it may have attracted the others to stay with it.

By October 12th an adult drake had acquired practically full plumage, which was quite complete by October 26th.

By November 2nd fresh arrivals had come and a party of five included two adult drakes.

The four Goldeneyes were joined by an adult drake Common Scoter (*Oidemia n. nigra*) on July 30th.

A. W. BOYD.

FLOCKING OF WOOD-PIGEONS IN EARLY SUMMER.

FOR the past two seasons flocks of Wood-Pigeons (*Columba p. palumbus*) have been noticed during May and early June in the parish of Dalston, Cumberland. Thus, on May 20th, 1923, I counted a flock of eighty-two birds feeding in a field sown with rape, and in 1924 a flock varying from one hundred and fifty to one hundred birds was seen frequently between May 8th and June 7th. Are these flocks composed of unmated birds or of winter visitors which have delayed their migration?

R. H. BROWN.

REEVE IN CO. DOWN.

MR. J. A. S. Stendall had a Reeve (*Philomachus pugnax*) sent to him for identification a short time ago. It was obtained on a marsh, one mile inland from Groomsport, co. Down, on October 11th, 1924. Mr. Stendall remarks that this bird is a rare visitor, chiefly in autumn, but has been recorded in every county in Ireland.

W. H. WORKMAN.

AVOCETS IN KENT.

ON August 17th, 1924, I visited Littlestone-on-Sea, an adjunct of New Romney. There was a stiff S.W. gale blowing and constant squalls of rain, but it was not cold, and the weather cleared about 1.30 p.m.

About 4 p.m. the tide being then "out," I observed three birds approaching from the east, flying at a fair height, abreast, and fast, across and over the sands, not very far offshore. The flight at once attracted my attention, and I turned my glass on them and recognised them to be what I had suspected, three Avocets (*Recurvirostra avoëtta*).

They continued their course towards Dungeness Head. I had seen these birds on the coast of the Mediterranean, and was familiar with the flight and general appearance on the wing.

H. M. RAIT KERR.

SPOTTED CRAKE IN CO. LOUTH.

It would probably interest some of your readers to know that a Spotted Crake (*Porzana porzana*) was shot by Mr. Swan, Jun., of Redbarns House, Dundalk, when duck shooting in September, 1924, in a deep soft bog near Dundalk. The bird was in exceptionally fat condition and weighed $4\frac{1}{4}$ ozs. It is a rare and interesting visitor to this part of the country.

W. H. WORKMAN.

LATE NESTING OF SAND-MARTINS.—Mr. B. Clarke informs us that while passing through a village near Tiverton, Devon, on September 14th, 1924, he saw a pair of Sand-Martins (*Riparia r. riparia*) enter a hole in a wall by the roadside. They were evidently feeding young, as the latter could be heard calling.

OBITUARY.

THE REV. MAURICE C. H. BIRD.

WITH the death, on October 18th, 1924, in his sixty-eighth year, of the Rev. Maurice Bird, for forty years rector of Brunstead, Norfolk, there passes a great field-naturalist, and a type which is becoming each year more rare as "the old order changeth."

A man of exceptional intellectual gifts and culture, the Rev. Maurice Bird was yet content to spend his whole life in a small parish in the Broad-lands of Norfolk. And the reason was not far to seek, for to him the life of this remote Norfolk village, and its surroundings of Broads and marshland, was one of absorbing interest, and he used his fine powers of observation and insight to acquire a knowledge of Nature, and of every aspect of country life, which is seldom attained by one man.

In Maurice Bird there was much of Gilbert White, and much also of his clerical predecessor, the Rev. Richard Lubbock, author of the *Fauna of Norfolk*. A fine shot and a skilful fisherman, his knowledge of country life covered an extraordinarily large field. Not only was he an excellent field-ornithologist, but he had an almost equal knowledge of insects, botany, agriculture, meteorology, and such subjects as folk-lore and dialect.

Few men, I believe, could have written the comprehensive survey which he contributed to the *Transactions of the Norfolk and Norwich Naturalists' Society* upon the drought of 1921, and its effects upon agriculture and the animals, birds, insects, and plant-life of Norfolk.

Though he made but few contributions to purely ornithological literature, he was for many years responsible for most of the observations upon the birds of the Broads district which are to be found in the late J. H. Gurney's "Annual Ornithological Reports for Norfolk"; and, in making these notes, his intimate acquaintance with the gunners, marsh men and keepers of the district, and the esteem in which he was held by them, gave him opportunities for observation and for obtaining information which few have had.

Amongst his contributions to ornithology may be mentioned the section on "Birds" in W. A. Dutt's *Norfolk Broads*, a series of articles on "The Bird Life of the Norfolk Broads" for "The Field Club," "Bird Life on the Broads in Summer," and "Winter on the Norfolk Broads" for the *Field Naturalists' Quarterly*, and a considerable number of notes contributed to *The Zoologist*.

It is his diary, however, to which the writer was allowed access, which reveals the extent of his knowledge of the birds of East Norfolk, and it is very much to be hoped that this may one day be published. Written up almost daily over a period of some fifty years, it presents a continuous record of Norfolk country life which is probably unique.

He was elected a member of the British Ornithologists' Union in 1892, and of the Norfolk and Norwich Naturalists' Society in 1882, of which latter Society he was President in 1908-9.

His striking appearance and singularly attractive personality will long be remembered in Norfolk, where his loss is deeply felt by all who knew him. B.B.R.

LETTERS.

ON THE SCIENTIFIC NAMES OF THE LIGHT- AND DARK-BREASTED BRENT GEESE.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Professor Lönnberg's article under the above heading in the October issue of *British Birds* (*antea* pp. 135-8), while agreeing with the author that the name *bernicla* is applicable to the dark-breasted form of the Brent Goose, I am still awaiting absolutely convincing proof that the light-breasted and the dark-breasted forms are geographical subspecies. Moreover, we have known for some years what the name *hrota* means. It is true that on p. 1296 of my book on

Palæartic birds I placed the name *hrota* of Müller (misprinted *hrota*) as a doubtful synonym of *Branta leucopsis*; but afterwards, having seen Müller's book, I correctly stated on p. 2221, and again in the *Nachtrag*, p. 73, that the name *Anas hrota* Müller, 1776, was undoubtedly a name referring to a Brent Goose, in spite of Dr. Laubmann's statement that it could only refer to *Branta leucopsis*. But, while agreeing as to which species it belonged, I doubt the correctness of using this name for the light-breasted form. It is described as being on the "Leib grau und auf der Brust am hellsten." By "Leib" probably "body" was meant, but can one say that it is "lightest" on the breast? Even if "Brust" (=breast) should have been used for abdomen, "lightest" is hardly a fitting description for a perfectly white portion of the plumage.

ERNST HARTERT.

TRING, *October* 1924.

ON THE NESTING OF THE FLAMINGO IN THE CAMARGUE.

To the Editors of BRITISH BIRDS.

SIRS,—I was greatly interested in Mr. Glegg's account of the Camargue Flamingoes (*antea*, pp. 146–154), and was glad to learn that they are maintaining their numbers. His description of their promiscuous egg-laying gives colour to my supposition that these birds are nowadays seldom, if ever, allowed to rear their young in this district. Their manner of laying in this haphazard way on the open ground seems to indicate that the birds have been so systematically and persistently disturbed that they no longer attempt serious nidification. In any case, the records of local birds in immature plumage are so few that it is impossible to suppose that the numbers of the Camargue Flamingoes have been maintained by home-bred individuals.

These wide expanses of shallow lagoons, teeming with aquatic life which forms their favourite food, are no doubt ideal summer quarters for these birds, and in all probability the visiting flocks are annually augmented when they return from their winter sojourn in Africa.

There can, however, be no question that the Flamingoes occasionally succeed, or have succeeded, in rearing their young in the Rhone Delta. For instance, in 1908, I examined an immature bird that had been killed near Toulon in February of that year, and there is another example in the same plumage in the Nîmes Museum. Moreover, M. de Chapel, who had a shooting at Méjane in the Delta, informed me that he had several times seen young birds and had witnessed their capture by dogs. Formerly Flamingoes used to nest also in the Fourneaux *étang*, situated on the right bank of the Little Rhone and close up to Aigues Mortes, but they appear to have now deserted the neighbourhood of this mediæval town. About twenty years ago a M. Pranishnikoff took photos of a very large assembly of nests, numbering about seven hundred (*cf.* de Chapel, *Bull. Soc. d'Acclim.*, 1904, p. 207).

COLLINGWOOD INGRAM.

BENENDEN, *2nd November*, 1924.

The following extract from a note, supplied to me by M. J. de Chavigny, may have some interest in this connection: "Deux œufs de Flamant rose, Étang de Valcarès recueillis le 14 Mai, 1912, par M. Clément, Boucher à Nîmes, mort pendant la guerre. Le même jour (horresco referens!) il avait dévalisé de la sorte 43 nids de Flamants, dont un avec une ponte de 3 œufs, fait rare et tout à fait anormal."

F. C. R. JOURDAIN.



REVIEWS

Broadland Birds. By E. L. Turner. (Country Life Ltd.) Illustrated with Photographs. 15s. net.

THAT Miss Turner has made a special study of the birds of the Norfolk Broads is well known to the readers of this magazine, who have had opportunities from time to time of enjoying her articles, and this book is the eventual outcome of the twenty or more years she has "lived in the reed-beds." It is evident from every page of the book that she has made the best use of those long years of observation. The introduction gives us an insight to the kind of life she has led—a life that few women could stand for days, still less for years—but Miss Turner, by virtue of her extreme keenness and strong sense of humour, triumphed over minor difficulties. There follow chapters on some thirty species of birds. Each is a study of the birds' life-history unravelled by this patient watcher hour after hour and day after day regardless of discomforts. And for these studies, simply but clearly told and unencumbered with theories or unlikely interpretations, every bird-student must be sincerely grateful. We specially commend the chapters on the Bittern, Water-Rail and Grasshopper-Warbler, all most difficult birds to observe, while that on the Bearded Tit may perhaps be picked out, though all are good.

The book is illustrated with sixty-nine photographs, all of which are excellent, some perfect, and most not mere portraits but useful records of some phase or incident in the bird's life. The photographs are well reproduced and printed, but we do not like the format of the book, and its long, closely-spaced lines of rather small type of a cut which is most irritating to the eyes, make reading difficult instead of a pleasure.

We heartily congratulate Miss Turner on having not only the power to see what is hidden to many others, but also the gift to tell so truly and withal so pleasingly what she has seen. We are grateful for this valuable record of her years of observation of the birds around the home she made amongst the marshes and reed-beds of Norfolk.

British Waders. Illustrated in Water-Colour with Descriptive Notes.
By E. C. Arnold. (Cambridge Univ. Press.) £3 10s. net. Demy Quarto. 51 Coloured Plates.

To attempt to illustrate in colour all the British Waders, even in a single stage of plumage, is a piece of work which few "amateur" artists would be bold enough to undertake. Mr. Arnold, however, has carried through this ambitious task, and, while there is much in the result which is open to criticism, there is also much to commend. It is true that Mr. Arnold lacks the power of making a really attractive picture, but many of his sketches are quite pleasing and give a good idea of the bird, though of others the reverse might be said. But it would be unfair to be too critical of such a work, which is, we imagine, the outcome of an ornithologist's great interest in these birds rather than of a desire to put himself in an assured position as an artist. We may, however, remark that there are two serious omissions in the plates; one being that no comparative scale is given, and this was very necessary since no attempt has been made in the drawings to maintain

the correct relative sizes of the birds, and a measurement of total length (given in the text) is a very inadequate guide; secondly, the sex and date of the specimen drawn and whether it was adult or immature are omitted, though some of these details can be gathered from the text. The text of the book is slight but readable, and contains observations of considerable interest especially in connection with the identification of certain species in the field, as well as several notable records which, as Mr. Arnold frankly owns, will not be generally accepted, because each lacks some essential evidence which would afford conclusive proof. Mr. Arnold has been very well treated by his publishers, the book being beautifully produced in all respects.

The Fauna of British India, including Ceylon and Burma. (Published under the authority of the Secretary of State for India in Council.) Birds. Vol. II. (Second Edition.) By E. C. Stuart Baker, O.B.E., F.Z.S., etc. (London, Taylor & Francis).

THIS second volume of Mr. Stuart Baker's valuable work is in the same form as the first, except that we are now given the original reference, type and type-locality for each genus, which will be useful to systematists, and keys to the subspecies have been added. This volume is chiefly concerned with the Dippers, Chats, Thrushes, Flycatchers, Shrikes and Warblers and contains a good many species to be found on the British list. Amongst the Chats we notice the statement that *Saxicola torquata indica* differs from *S. t. rubicola* in having the black axillaries and under wing-coverts tipped with white, whereas the distinction lies rather in the axillaries of *S. t. rubicola* having wider white fringes than is the case in *S. t. indica*.

Mr. Baker follows Oates (we gather with some doubts) in splitting the Thrushes into a good many genera, founded upon the sexes being alike or not alike and the under-wing uniform or parti-coloured—characters which appear to us to be of no great importance. Mathews and Iredale have pointed out (*Austral Av. Record*, V., pp. 76-77) that the Blackbird was designated as the type of *Turdus* by Selby in 1835, and Mr. Baker states that this generic name would have to be adopted for the Blackbird even if *Merula* were not preoccupied. This leads the author into the necessity of using the generic name *Arccu'hornis* for Thrushes such as the Mistle-Thrush, Redwing and Fieldfare, which he splits from the Blackbirds. *Turdus atrogularis* he considers as a distinct species and not a form of *T. ruficollis*, while he also divides specifically *Turdus (Oreocincla) dauma* and *aureus*. There are many other points of interest to British ornithologists in Mr. Baker's work, more especially perhaps in the careful notes under the heading of "nidification" in each species. To those who work in India, it need hardly be said, that the work is indispensable. As in the first volume, so in this, there are the useful text figures which appeared in the first edition, as well as some coloured plates from the author's own drawings, but it must be said that the latter are not up to the standard of modern work and in fact remind one of drawings which appeared a hundred years ago in such works as Latham's *Synopsis*.

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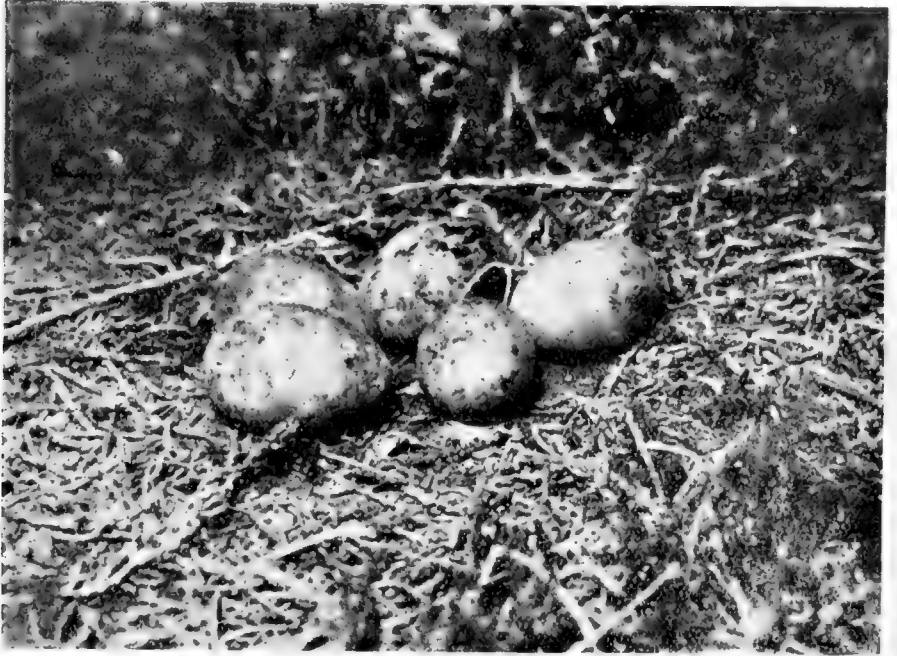
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ON THE NESTING OF THE GULL-BILLED TERN IN THE CAMARGUE.

BY

WILLIAM E. GLEGG.

THE Gull-billed Tern (*Gelochelidon n. nilotica*), although not a breeding species, is included in the British list on the strength of some twenty-eight occurrences, which have been recorded in spring or summer chiefly from the east and south of England. The chief breeding haunts in Europe are the



FOUR NESTS WITH CLUTCHES OF FIVE WERE FOUND.

(Photographed by W. E. Glegg.)

coasts of Jutland and the Mediterranean countries, as Portugal, Spain, France, Greece and Rumania. In the various descriptions of the breeding distribution of this species the Camargue is invariably included, but on making inquiries as to the definite nesting locality in this district no information was available. In starting on our journey we did so without knowledge that the bird still nested in the Rhône delta. Dr. Eagle Clarke (*Ibis*, April 1895), although he saw a few at the mouth of the Grand Rhône, did not obtain any evidence of nesting. Mr. Ingram (*Field*, Sept. 1908) was equally unsuccessful, but probably he was nearer

the mark as he saw some of these Terns on the western half of the Etang du Valcarès, where we had the good fortune to find a large nesting colony. Owing to the number of the islands in this large lagoon it is not easy to say exactly on which of them we found this Ternery on May 20th, 1924, but the position of this particular island may be described as among the most southerly and westerly. It is of some interest that practically all the nesting birds, with the exception of some Common Terns which had taken undis-



NEWLY HATCHED YOUNG OF THE GULL-BILLED TERN.

(Photographed by W. E. Glegg.)

puted possession of an adjacent tiny islet, were crowded on two small islands separated by about half a mile of water. The bird population of these two islands included Larks, Flamingoes, Red-crested Pochards, Kentish Plovers, Avocets, Gull-billed, Common and Little Terns, and Black-headed Gulls. Very many nests of the different species were found. It is not easy to assign a reason for the preference shown by the birds to these islands. Protection suggests itself as a possible cause, but there seemed to be

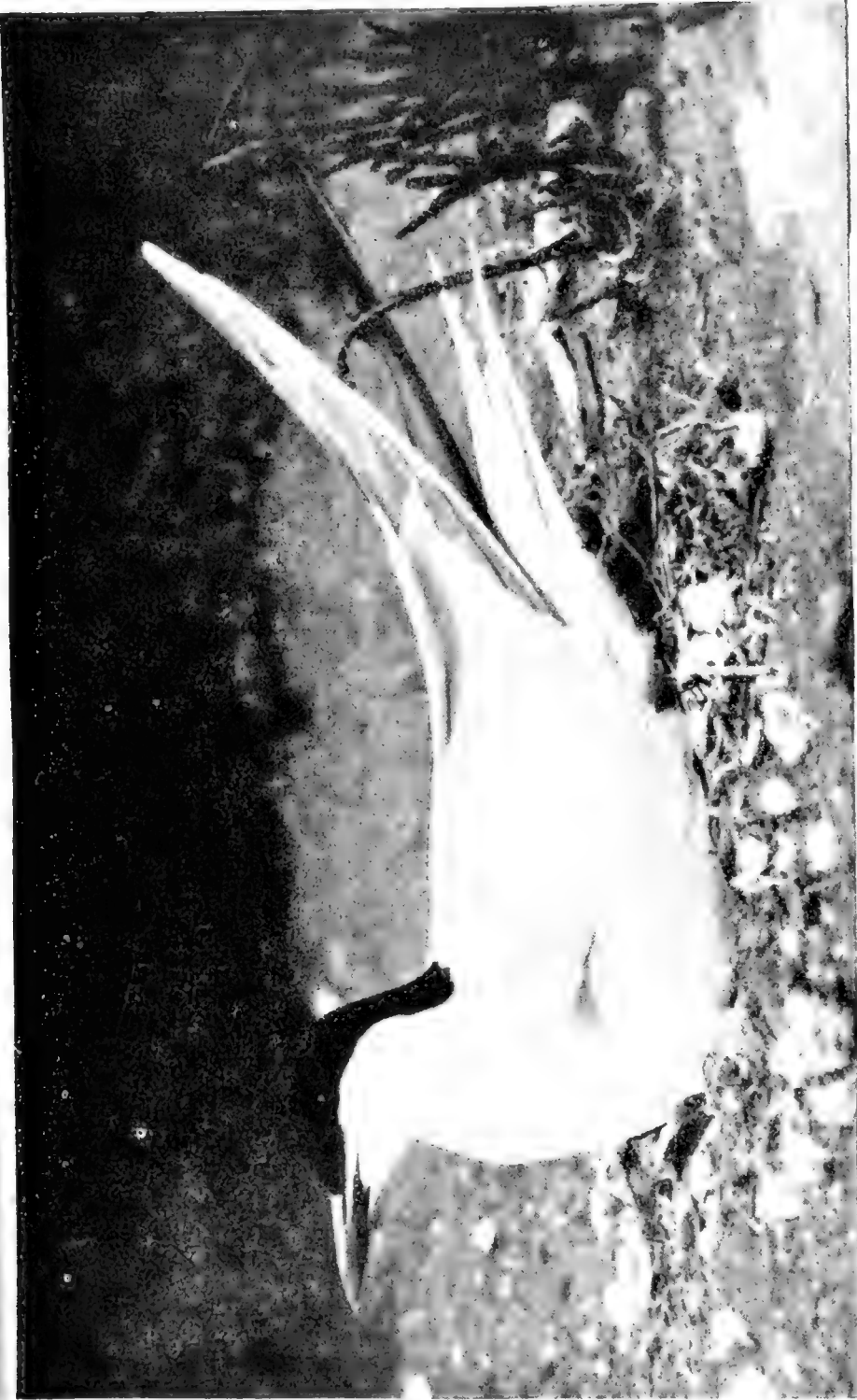
few enemies. The Marsh-Harrier is a very common species—my companion finding six nests in one day—but I never saw the Harrier near the islands. On one occasion two Short-eared Owls made their appearance and stayed for some time, but they were the only predatory forms that we



IN THE FULL BLAZE OF THE SUN.

(Photographed by W. E. Glegg.)

saw among the nesting birds. A few Carrion-Crows might be seen daily near Stes. Maries but they never seemed to go far from the village. These islands, the chosen of the birds, were more or less covered, above high-water mark, with thick vegetation chiefly composed of what, I am informed,



CONFIDENTLY SETTLED ON EGGS.
(Photographed by W. E. Glegg.)

are *Suaeda fruticosa* and a species of *Salicornia*. The colony of Gull-billed Terns, which, I estimated, contained seventy to a hundred pairs, was located on the more northerly island, the many nests being crowded together on the north-west corner at the line of demarcation between the mud and the vegetation. Most of the nests were on the mud but many were placed on the open spaces among the bushes. The nesting material, which consisted of bents and shells, varied considerably in amount. The most interesting feature of this colony was the sizes of the clutches, which varied from one to five eggs. Three was undoubtedly the predominating number, but there were many nests with two, a few with one only, four with four, and four with five eggs. I have no reason to think that these larger clutches were the product of more than one bird in each case. I think that this is the first occasion on which clutches of five of the Gull-billed Tern have been recorded and even those of four are unusual. Two to three eggs are generally quoted as the normal size of the clutch. Seebohm (*British Birds*, Vol. III., pp. 265-6), describing his experiences with a colony of these Terns near Smyrna, where the conditions appear to have been very similar to those in the Camargue, states "The most common number of eggs in each nest was two; three was not uncommon, but we never found four in one clutch." This author also refers to his experiences with a breeding colony of this Tern at Missolonghi, but as he does not refer to the size of the clutch presumably he found nothing new. The idea seems to be gaining ground in the minds of ornithologists that the size of the clutch of a particular species may vary according to district, and a tendency towards larger clutches may be a fixed function of the Gull-billed Terns of the Camargue, but further information is required before a definite conclusion can be formed. In this connexion it must not be forgotten that there is evidence to show that the size of the clutches of a particular Tern colony may vary in some years. It may be added that there appeared to be no tendency towards larger clutches in other species as Avocet, Kentish Plover, Common and Little Tern, all being what might be described as normal.

My experience with other species of Tern is that at the nest they are decidedly confiding and speedily become used to the presence of the hide, and so it was with the Tern under consideration. My hide had not been in position thirty minutes when the bird which I desired to photograph was settled on its eggs, and other birds whose nests were still



“ THE EMBODIMENT OF VIGOROUS ACTIVITY.”
(*Photographed by W. E. Glegg.*)

closer returned even earlier. On the following day the Tern came on to the nest a few minutes after I entered the tent. The sight from the hide was full of interest and charm as there were many nests at close quarters and the owners, sometimes both sexes, were in close attendance. So many nests under easy observation afforded a good opportunity to learn if both sexes share in the incubation, but although I was in the hide for periods of varying length, on one occasion for as much as five hours, I was unsuccessful in obtaining the necessary evidence. If any change was effected it must have been in the air, but circumstances did not suggest that this was so. Periodically the colony of sitting birds would rise excitedly into the air, almost *en masse*, without any apparent reason, although it may have been caused by the arrival of a bird with food. The Terns under my notice joined in these general movements, but they never left the nest in such a way as to suggest that a change was being made. If both sexes share in this part of the parental duties, as seems to be the case with most Terns, it may be that the periods are lengthy, or, as in the case of the Black Tern, the major portion may fall to the female.

I devoted all possible attention to the question of the food supply, but without much enlightenment. Small fish were brought repeatedly to the Common Terns within my view, but none to the Gull-billed unless it was delivered in the air. Probably most of the food was obtained at some distance from the nesting ground. Very little, if any, fishing seemed to take place in the Etang du Valcarès, and the Terns could usually be seen flying seawards and also across the fresh-water étangs, but, although small fish were very numerous in the latter, I have no note of having seen the Terns fishing there. As the water of the étang became shallower, a large stretch of mud near the Ternery was exposed and this was usually the haunt of a number of Gull-billed Terns. Some form of food may have been the attraction.

This Tern is as noisy as it is active. It possesses two distinct notes, one of which is an unvarying dissyllable which, to my ear, sounded like "gaa-waak." This note is usually delivered on the wing. The other note may be described as a scolding trisyllable, but not unvaryingly so, for it would be increased to varying lengths. The transliteration of this note I found too difficult, but my description, made while in the hide, gives it as a tittering note repeated more rapidly when getting close to the nest, and, at times, finally

developing into a chuckle, Seebohm, in the article already referred to, states that in Greece and Asia Minor, at its breeding colonies, the note reminded him of the laugh of the Herring-Gull, and describes it as "ef, ef, ef," or "af, af, af," but he describes the note heard in the Black Sea as "käy-vek, käy-vek."

The birds under my observation, like other species of Tern, never descended far from the nest, very often they dropped to its edge. Many of the attitudes adopted at this stage were the embodiment of vigorous activity, but although very beautiful, yet not reaching the degree of gracefulness of the Common Tern. The primaries of the latter, when the wings are fully raised, point almost vertically, while those of the Gull-billed Tern point little more than horizontally. In this respect the species may be described as intermediate between the Common Tern and the Black-headed Gull. In taking off from the ground the feet of the Gull-billed Tern are instantly brought together.

There was not much conflict between the different species, but if a Tern came too near the nest of an Avocet, the rapier-like bill of the latter speedily demonstrated the superiority of its owner. On one occasion a large mixed gathering of Herring- and Black-headed Gulls made its appearance in the colony, but these birds made no attempt to interfere with the Terns.

Laying would appear to have started among the Gull-billed Terns almost simultaneously. On June 6th young were found generally throughout the colony, while two days previously not one had been seen. The nestlings have no black on the end of the bill, as in the Common Tern, and I found this a very ready means of distinguishing the young of the two species in the field. During the early days of the life of these young Terns the power of the sun is, no doubt, a serious menace and the shelter, provided by the vegetation of the islands, must materially enhance the chance of successful rearing. As soon as the youngsters have strength they disappear among the bushes. In view of what I have said previously, it may be well to add that other tenantless islands were equally favoured with vegetation.

So far as our experiences went (they were limited to the country within walking distance of Stes Maries), the Gull-billed was more numerous than the other three species of Terns, Black, Common and Little, which were identified.

ON THE DISPLAY AND NESTING OF THE
GREAT CRESTED GREBE IN SCOTLAND.

BY

HENRY BOASE.

DURING recent years the display of the Great Crested Grebe (*Podiceps cristatus*) has attracted considerable attention in consequence of its elaborate nature. The writer does not claim that there is anything new in the following notes; the general form of display has been described many times, but in the variations of detail there is always something of interest, and so these notes are put on record.

The first display was seen on April 15th, 1918, at a loch lying about 700 feet above sea-level. When first noticed the two birds were facing one another, neck extended and stiffly erect, ruff and crests expanded, the latter standing up vertically. Each alternately turned the head and retracted the neck, dropping the head on the back, the bill pointing backwards and to one side, the final position being that of a resting bird. Sometimes the bill was buried in the plumage of the back as though preening. The original attitude was then resumed, the display of each occupying perhaps two or three seconds. At intervals the birds merely shook their heads, first one and then the other, in imitation.

Both birds then dived and came up apart, crests and ruff still erected, and swam towards each other with neck retracted and head held low, the ruff standing out almost at right angles to the neck. When almost touching, each erected itself on the water, standing as it were on the tail, breast to breast but an inch or two apart, body and extended neck in line and head normal to the neck. Each bird was holding a tuft of weed in its bill, and each turned to its right and to its left, only the head moving, and the two birds turning together, in all perhaps half a dozen times. One then dropped to the normal position while the other remained erect for a few seconds and then resumed the normal attitude. While erect there was no evident disturbance of the water nor did the birds sway. Without further display the pair swam away, but at intervals afterwards met again for a short spell of the "head-shaking" and "preening" display. Calls, if any, were masked by the clamour of the Black-headed Gulls on the loch.

A somewhat different display was watched during the afternoon of April 6th, 1924, at a loch about 600 feet above sea level. The weather was cold and raw with east wind. When first seen the birds were feeding apart, and the male called at intervals "ar-ar-ar- - -" without any notice being taken by his mate some distance away. He then came swimming towards her with wings slightly arched, and now and then stretched out the head and neck in line with ruff expanded and touching the water, the crests lying normal on the head, calling a harsh "r-r-r-r- - - - -" note. The female at first paid little attention, merely glancing in the direction of the male.

The male then raised the wings in a manner recalling the Coot, closing the gap between them over the back by spreading the secondaries and exposing the white wing bar, and projecting on either side apart the closed groups of primaries, like horns. The head was drawn down with the ruff spread out around it on the base of the neck and the crests stood erect, forming a strange centre piece to the rounded mass of the raised wings. He did not keep the head down all the while, however, but once or twice raised and shook it or preened about the base of the neck.

Meanwhile the female dived in his direction, rose for an instant with scarcely a ripple and dived again and again until she rose just before the male. Instantly she dived again and the male, as though knowing where she would presently appear, swung round to face a rearing tapering pillar of gleaming silver before him as the female emerged, bill, head, outstretched neck, and body in rigid line, with crests and ruff held flat on the other plumage, to stand erect for an instant, a most remarkable object.

In a moment the female had resumed a normal attitude and the male had also changed, and the two birds faced one another with stiffly erected neck, ruff standing out and crests upright. The birds began the head-shaking display, first the one, then the other, once or twice both together, once or twice reverting to the preening display—just a pick at and raising of a few feathers on the back by one and the exact repetition by the other (the male began this), or to the turning of head from side to side, each looking to its right or left, both changing position simultaneously. The head shaking varied in two forms. In the one the bill was pointed upwards and the head rather rotated than shaken, the bill tracing a more or less circular path of small radius (both did this, but the female was first noticed doing so), and this form was used immediately after the appearance of the female. In the other

form the head and bill were held normally and swung from side to side, tracing an arc only.

After the head-shaking display the male started another form. The neck, erected to its limit and even its base thrust upwards, was bent sharply near the head, the bill pointing straight downwards, the ruff now framing the head and the crests standing out, the bend of the neck being sufficient to incline the upper surface of the ruff towards the water. Both birds in this attitude swam here and there, now side by side, now facing, now turning aside this way and that, and one, or perhaps both, uttering a low chatter "k-k-k-k- - -." Both seemed very excited and after a short period, probably half a minute or so, the birds returned to head shaking and afterwards separated. They met again, however, in a minute or two and gave the display once more without any preliminary head shaking.

The male then swam in among the sedges, leaving the female, which kept the crests erect but the ruff unexpanded. She seemed to pretend that she did not know where the male had gone and peered here and there expectantly. The male meanwhile was swimming to and fro among the reeds and was there joined by the female. While not well seen, it seemed that when the male met the female he carried a tuft of weed, which was subsequently dropped during head shaking. They then separated, but when last seen the female still retained the crests erected as though the display was not completed.

These displays are said to be carried out only subsequent to the mating of the pair. Special behaviour previous to mating has not come under the writer's notice, beyond the suggestion contained in an observation made on March 12th, 1921. In all five Grebes were on the loch that day, two pairs and a solitary male. The latter alone showed any excitement, and swam round with neck outstretched and ruff expanded, sweeping the water as he swung the head and neck from side to side and made every effort to interest one of the mated females. The male of the pair provoked attacked swiftly, making a rush on the surface, and the two birds reared up on the water as they met somewhat as in display but relapsed immediately to a normal attitude. The unattached male then retired without further effort. Later one of the pairs made display in the ordinary form—surely an early date.

The arrival of the birds in spring at their nesting places has followed entirely normal lines, in that the first arrivals have been single birds, not necessarily males, however, so far

as field observation can determine. On the Tay estuary, in winter and early spring, the birds seen are almost invariably solitary, yet later on, particularly in April and May (up to the second week), pairs are more usual on salt water, which would suggest that mating may take place before the arrival at the actual nesting place and perhaps on salt water. It is further hinted in the departure of solitary males from nesting lochs which later return with a mate. Of the nature of this courting behaviour the writer has no record, but in one instance head shaking and preening display has been seen on the part of a pair on salt water in the third week of April. The presence of pairs on the estuary in May, at a time when some at least of the local birds may be incubating, would ordinarily suggest passage, yet in the case of the Great Crested Grebe, which so far has not crossed the barrier of the Grampians to nest, this cannot be so, yet it does imply a persistent tendency to push northwards.

Two hill lochs on the borders of Perthshire and Forfarshire have been occupied annually by one and sometimes two pairs of Grebes each summer for a number of years. These lochs are both almost 700 feet above sea level, the one rather exposed, the other well sheltered. On the more exposed loch nests have been found on May 4th (three eggs—one fresh), May 24th (five eggs—incubated), April 29th (three eggs), and May 19th (three eggs), and of these four nests only one, that of April 29th, resulted in the rearing of a young bird. The cause of failure in one case at least was the drop in water level which left the nest almost dry; the four nests were so situated that an approach under water was possible, and presumably any serious drop in level would result in the abandonment of the nest. At the other loch watched, the presence of young was the only certain indication of nesting, and these appeared in July. The chicks in their early days must be delicate, for twice at least has the whole brood been lost in the first week, and in other cases one and sometimes two young have been reared. At present it is not clear whether these July broods have been first or second attempts at nesting; the writer has been from home during the first days of June for some years, but in no case has a juvenile been seen in mid-June, so it seems probable that these July broods represent the first attempt for the year. At this loch recently hatched young have been seen as late as August 20th, but these did not survive the first week.

At a third loch, partly artificial and used at long intervals as a mill pond, the disappearance of well-grown young still

incapable of flight can be accounted for by the change in water level consequent on the use of the water mill spoiling the food supply, yet year after year a pair seek to rear a brood there, but so far have failed to do so. At the group of lochs situated east of Dunkeld the conditions are more favourable, and commonly the whole brood of three or four young is reared. Only one nesting date has been got from these lochs, that of June 19th, when a pair were seen carrying weed dragged from the bottom into a thick reed-bed, which nesting would result in the hatching of young in July.

In the cases watched, the care of the young in the early stages devolved on the male, on whose back they were carried, while the female sought food by diving, apparently providing insect forms picked from the weed brought from the bottom. Once, however, the female gave a tiny fish, having crossed the loch in a succession of shallow dives, as when approaching the male in display already described. At a later stage the female took the young on her back while resting; once she tipped them off by rearing on the water and spun round and round, endeavouring to shake off the chicks clinging to her, and the chicks immediately swam to the male and climbed up on his back. During the next period, after the young have attained to the grey down but are still small, the female seemed to be in sole charge, and the young dived freely with the adult, the male paying little heed; finally, when two young were reared, the adults each took charge of a juvenile and continued to feed their particular charge until full grown, bringing food to the surface for the juvenile, which dived comparatively seldom until nearly full grown.

During the transition period, before the adults had definitely taken charge of one juvenile, there arose the following incident, in which there appears to be a hint of instruction of the young bird in procuring food. At the time two pairs of Grebes were on the loch; one pair had two young about two weeks old and the other pair had recently lost their brood. When first seen one adult (female) and one juvenile were together, while out in the middle was the other juvenile and the female of the other pair. This second group seemed little interested, and though the young bird seemed to seek the attention of the adult near at hand, the latter of course took no notice and they finally separated, the young bird drifting away across the loch while the old bird was joined by its mate along the other shore. Meanwhile the other juvenile had been calling lustily for food, and the male suddenly appeared carrying a fish quite five inches long. The young bird hurried to him,

followed by the female, and tried to seize the fish. The male pulled it from the grip of the young bird, seemingly tempting it, and after a game of give and snatch, male, female, and juvenile dived with a considerable splash. In a second or two all three returned to the surface, the male (apparently the male still—the male and female were very alike) still holding the fish, and almost immediately the young bird was given the fish which it swallowed with some little effort. Shortly after the young bird retired among the sedges, presumably to digest its recent meal.

In a quarter of an hour or so the male again appeared with a fish about six inches long. Immediately the female swam to him, and keeping station close behind, the pair swam to and fro before the reed-bed, searching apparently for the young bird. The male seemed to resent the attention of the female, appeared to think in fact that she wanted the fish for herself, and every now and then took wing and flew a yard or two, only to resume at once his peering and seeking all around. He got quite excited, swimming with the base of the neck raised up from the water to get a higher view point. Finally he seemed puzzled, and turning about faced the female and allowed her to bite at the fish and then surrendered it to her. She then began to search for the young just as the male had done, and he kept close behind in the same manner as she, though less ardently. After a minute or two the male went forward and seized the fish once more and again made search for the young. Both by this time were obviously losing interest. The male now went into the reed-bed for a look round but came out still carrying the fish; then both went in and returned to open water almost immediately, now without the fish, and began to dive steadily.

It seemed most likely that the fish had been dropped and lost and not consumed by one or other of the three birds; obviously the young bird just fed could hardly have accommodated another fish, and the determined diving of both adults indicated that neither had swallowed it. Presumably they were sorely puzzled by the absence of the second juvenile, which had drifted away uncared for; that alone seems the explanation of their behaviour, and it is interesting to find this symmetry of behaviour even in the feeding of the young. A later visit proved that the wandering juvenile had been found and was then established under the watchful care of one of its parents, but clearly it must be a serious danger for a young bird to drift away from the usual feeding ground of the family.

Of the ultimate departure of the Great Crested Grebe from its nesting places the writer has secured comparatively little information. In the few cases watched it seems that normally, when a brood is reared, the family remains until driven off the loch by the cold, and in one or two instances the young of the year remained after their parents had departed. Where no young have been reared the departure seems to be earlier, in particular during the first half of September, at which time not only do strangers appear on the lochs, but it is recorded on the Tay Estuary. During recent years it has been established that at times some birds remain on the sea during the summer (see June records, 1913 and 1914, *Report on Scot. Ornithology* for these years), but these summering birds must be in the minority in respect of records for September. Probably they are immature and non-breeding birds. Some at least winter in and about the Tay Estuary, and in doing so find winter quarters at the northern limit of the range of the species.

At present it would appear from the very uncertain success of its nesting that the Great Crested Grebe has pushed to the limit of its possible range in Scotland. There is stated on fair authority to be a nesting place on at least one Highland loch beyond the first line of the Grampians. The Great Crested Grebe was not found there, however, in July, 1924, and from the general condition of the loch it seems unlikely that any further attempts will be made to nest there on the part of this interesting bird.



NOTES

THE TIME PERIOD FOR NEST AND EGG REPLACEMENT.

ON May 21st, 1919, in Hampshire, I found the nest of a Nightingale (*Luscinia m. megarhyncha*) containing four eggs, built in a very exposed situation in a lane. At 7 a.m. the next morning it held five eggs, but later in the day these had been taken. Early in the morning of the 23rd I watched the birds building a new nest about six yards from the old one. On the 30th it contained four eggs. I left the neighbourhood the next day, so do not know if any more were laid.

On May 16th, 1920, I found the nest of a Tree-Pipit (*Anthus t. trivialis*) at North Wooton, W. Norfolk, containing four eggs. This was unfortunately destroyed, but on the 28th a new nest had been built about three yards from the old one and contained five eggs.

N. TRACY.

AN AVIAN DEATH-TRAP.

AT Hollingbourne House in Kent, the residence of Mr. R. Duppa de Uphaugh, there are two plate-glass windows 10 ft. high by 4 ft. broad situated each side of the main entrance to the house. At one time, about thirty years ago, the centre part of the house was open and the main drive went straight through the building, the entrance then being on the right-hand side under a large archway. This was filled up and is now a hall. There is an avenue of trees to the house. Looking at the windows it appears from reflection that the avenue continues straight through the house. This is especially so when the sun is shining on them. Evidently the reflection of the avenue continuing represents to birds a clear flight, and fatalities against the glass have been continually going on for the last thirty years.

The following species have been picked up and identified :—

Wood-Pigeon, Bullfinch, Chaffinch, Hawfinch, Nuthatch, Sparrow-Hawk, Spotted Flycatcher, Song-Thrush, Stock-Dove, Marsh-Tit, Brambling and Blackbird; but no record has been kept of the number killed.

JAMES R. HALE.

[Similar happenings on a small scale have of course been frequently recorded though the place described above seems to be an unusually fruitful source of danger.—EDS.]

UNUSUAL SITUATION OF CHAFFINCH'S NEST.

Two nests that I found some years ago must have been built by birds as eccentric in habit as the one referred to by Mr. Connell (*antea*, p. 109). I quote from my note-book of the time:—

Chaffinch (*Fringilla c. cælebs*), Raincliffe Wood, near Scarborough, May 31st, 1903. Nest containing 3 eggs in cup-shaped cavity in top of decayed birch tree, 15 feet up, both birds seen. June 2nd, 1906, also Raincliffe Wood. Nest containing 3 eggs in hollow top of broken elder tree, 5 feet up.

W. GYNGELL.

INCREASE OF THE WOOD-LARK IN GLOUCESTERSHIRE AND SURREY.

IN his note on the breeding of the Wood-Lark (*Lullula a. arborea*) in the counties of Shropshire and Worcestershire, Mr. J. S. Elliott (Vol. XVIII., p. 75) mentions that he heard one singing last summer in the Cotswolds above Broadway. It may be of interest to record that a colony of these birds flourishes a very *few* miles to the south and south-west of this point. The locality is in Gloucestershire, but a few pairs inhabit a tract of Worcestershire surrounded by Gloucestershire. I believe this to be a very recent extension of breeding area, but only a local one, as I have been informed that the neighbourhood of Cleeve Hill has been a known locality for many years. In October, 1923, I noticed a small party, and returning to the same place in April, 1924, I found two birds singing but failed to find a nest. I revisited the place at Whitsuntide and found a nest containing four fresh eggs, and was shown another about two miles distant with five young just hatched. During April and May other nests with eggs or young had been found by keepers.

The favourite feeding ground during the breeding season seems to be stony grass fields cropped close by rabbits and overgrown with low bramble bushes, but the nests I have seen or heard of were in cut-down or newly replanted woods. During the War many acres of wood were felled and to this I think may be attributed, if not the first appearance of the Wood-Lark, at least a great increase in its numbers in the district.

Of the continued increase of this species in Surrey there can be no doubt. I returned this summer after an interval of three years to a locality in that county and found several pairs breeding where I had noticed none before.

G. CHARTERIS.

LARGE CLUTCH OF EGGS OF SONG-THRUSH.

ON May 14th, 1924, I found, some four miles from Perth, the nest of a Song-Thrush (*Turdus ph. clarkci*) containing eight eggs. The next day there was still another, and the bird was sitting. Unfortunately, I had to leave home for a fortnight just when the eggs were due to hatch. Immediately on my return I visited the nest, which contained one addled egg, and showed unmistakable signs of a large family having been successfully brought up. There were no traces of dead young birds beneath the nest, but I doubt if all eight could have been successfully reared. Nine eggs seem to be the largest number recorded for the Song-Thrush, and must be of very rare occurrence.

SCONE.

LATE SWIFT IN SOUTH WALES.

ON November 2nd, 1924, at 2 p.m., a Swift (*Apus a. apus*) was observed in the middle of the city of Cardiff, Glamorgan-shire, flying low down just clear of the overhead wires of the tramway system. It passed sufficiently near to see that the feathers of the right wing were damaged, which might account for the lateness of the stay, but it is difficult to imagine how food had been procured, if the injury was of such gravity that migration was prevented so long ago as August or September, the normal time of departure.

A south-westerly gale was blowing at the time.

CLEMENCE M. ACLAND.

GREAT SPOTTED WOODPECKER'S METHOD OF EXCAVATING NEST-HOLE.

IN the spring of 1924 I had an opportunity of watching a Great Spotted Woodpecker (*Dryobates major anglicus*) excavating its nesting-hole. I was able to get within about five yards of the bird. It worked inside the hole for about five minutes, then came out tail first and stopped with its claws on the rim of the nesting-hole, then put its beak inside, drew it out again full of chips and threw them over its shoulder; it put its head in nine or ten times and brought out a beak-full of chips each time. It then went back into the hole and worked for another five minutes, then backed out again and repeated its previous performance.

N. TRACY.

GOLDEN EAGLE IN BERKSHIRE.

AN Eagle was reported to have been seen on several occasions on the Downs south-west of Wantage during the last week

of July 1924, and on July 30th it was seen about 10.30 a.m. by Mr. A. Beesly and his keeper soaring over some rough ground, covered with long grass, to the south of Pinal Wood between Letcombe Bassett and Fawley. Later in the day the bird settled in the wood and was shot by the keeper, while sitting on a tree. It proved to be a Golden Eagle (*Aquila chrysaëtus*) and not, as might have been expected, an immature Sea-Eagle. Mr. Beesly gives the span of the expanded wings as 6 ft. 6 in. It is not a dark bird, but has a number of light coloured feathers on the mantle and shows no white on the rectrices. Mr. Beesly had it set up and subsequently presented it to the Reading Museum. It is perhaps worth mention in this connexion that a "Golden Eagle" is said to have been killed at Bala, North Wales, about the end of November 1923 (cf. *Field*, 31st January, 1924, p. 141), and Mr. Auden states that one of a pair turned down on an island off the coast of Pembrokeshire still survives.

F. C. R. JOURDAIN.

PROLONGED SITTING OF SPARROW-HAWK.

ON May 25th, 1924, I found the nest of a Sparrow-Hawk (*Accipiter n. nisus*) ready for eggs near Penzance. On June 7th it contained four fresh eggs of which I took two. On July 26th the bird was still sitting on the two eggs, which were evidently addled. The last date I found her sitting was August 8th.

Taking the incubation period at thirty-five days the last egg should have hatched not later than July 11th, so that the bird continued to sit for an extra twenty-eight days at least. The only other record I am aware of which relates to the length of time a Sparrow-Hawk will sit on a clutch of infertile eggs is that of Mr. J. H. Owen in *British Birds* (XII., p. 75), where he says that a bird "after eating two (eggs) on the thirty-eighth day from the first egg, deserted the nest." The entire period in my nest, from the laying of the *last* egg, was sixty-three days.

G. H. HARVEY.

GOLDENEYES IN LANCASHIRE IN SUMMER.

IN connection with Captain Boyd's note (*antea*, p. 194), on Goldeneyes (*Bucephala c. clangula*) in Cheshire throughout the summer of 1924, it may be of interest to record that, on June 13th, a drake in immature plumage was present on a reservoir near Bolton-le-Moors in south Lancashire. The face spot appeared to be complete, but the head was brownish

and there was much less than normal of white on the wings and body. It was in company with a duck of the same species—obviously crippled—which I first found on the water in November, 1922, and have seen frequently since then. I did not see the drake later in the month, or subsequently.

THOS. BADDELEY.

SMEW IN SURREY.

ON July 13th, 1924, I observed a female or young male Smew (*Mergus albellus*) on Hedgecourt Pond, in south-east Surrey. The chestnut head, white throat, and double white wing-bar were very noticeable, and quickly dispelled any doubts as to the identity of the bird. The date would appear to be unusually early for this class of visitor, which has, I believe, rarely been recorded before mid-September.

The Smew is normally a rare winter visitor to Surrey.

HOWARD BENTHAM.

KNOT IN SUMMER PLUMAGE IN OCTOBER.

A KNOT (*Calidris c. canutus*) in almost full summer plumage was shot on October 2nd, 1924, on the Lancashire coast. A medical post-mortem showed the bird, a female, to be suffering from cancer of the liver, in all probability the reason why it had not changed into winter plumage.

H. W. ROBINSON.

BLACK TERN IN SURREY.

AN immature Black Tern (*Chlidonias niger*) appeared at Hedgecourt Pond, in south-east Surrey, on October 12th, 1924. Mr. H. H. Farwig, who was with me, confirmed my identification. The bird has seldom been recorded from east Surrey, although its occurrence on the western side of the county is not very unusual.

HOWARD BENTHAM.

THE DISTRIBUTION OF BLACK GROUSE IN GREAT BRITAIN.

WITH reference to Mr. H. S. Gladstone's article on the distribution of the Black Grouse (*antea*, pp. 66-68) we have received the following notes with respect to its status in Staffordshire, Monmouthshire, Glamorganshire and Breconshire. It will be remembered that Mr. Gladstone divided the counties of England and Wales into four groups: (1) those in which the bird is extinct or a rare straggler; (2) those in which

it is nearly extinct or very local ; (3) those in which it is local ; (4) those in which it is numerous locally. In this list Staffordshire and Breconshire were placed in group (3), Monmouthshire in group (2) and Glamorganshire in group (1).

STAFFORDSHIRE.

We are able, after many years' study of the birds of Staffordshire, and from recent notes kindly supplied to us by landowners, and others, to give the following information which we believe to be accurate at the present time.

It may be helpful to our purpose if we divide our county into three areas by parallel lines, as follows:—

No. 1 area, comprising the whole of the County north of a line drawn from west to east through the town of Leek.

No. 2 area, comprising that part of the County between that line and a parallel line drawn through the town of Stafford.

No. 3 area, that part of the County south of the last mentioned line.

No. 1 area, comprising the Moorlands of Staffordshire, is one of the indigenous homes of the Black Grouse where their present status comes under Mr. Gladstone's "Head No. 4, Numerous locally," maintaining its numbers each year, and bags of from fifteen to twenty Black Cock are still made in a day's Grouse driving.

No. 2 area must now, we fear, be classed under Mr. Gladstone's "Head No. 2, nearly extinct or very local." Up to fifteen or twenty years ago the Black Grouse was local in this area, but nested in many woods, especially around Cheadle, Oakamoor, Croxden, Chartley, and Dilhorne, and also in the western portion of this area on Maer Hills, and the Bishops and Burnt Woods.

No. 3 area must also be classed under Mr. Gladstone's "Head No. 2." This area comprises an historic home of the Black Grouse, namely, Cannock Chase, of which *The Field* newspaper of October 1st, 1921, reported as follows:

"Lord Lichfield's Moor, Cannock Chase.—On October 21st, 1897, 7 guns killed 41 Blackgrouse. On October 20th, 1898, 8 guns killed 40 Blackgrouse, . . . and Lord Berkeley Paget has stated that before coal came to be the main black asset of Cannock Chase, there were 252 Blackgame killed in a single day's driving, and that on another occasion the bag was 189, while Lord Berkeley himself shot 126 Blackgame in one day to his own gun."

Lord Lichfield in a letter dated August 23rd, 1924, says:—

I am afraid that the period of the War and the Camp and troops on The Chase practically exterminated the Blackgame. In 1919 I saw one old Grey Hen, and in 1920 and 1921 I twice saw two Grey Hens together. Last year (1923) I saw a Grey Hen and a Black Cock one day in November."

Mr. Edric Wolseley in a letter dated September 25th, 1924, written from Park House, Rugeley, states that he saw a Black Cock and Grey Hen on his tennis lawn last spring (1924), and his Game Book shows that in 1842 the bag was 93, in 1843 it was 74, and gradually down to 36 in 1852. Between 1898 and 1904 he shot 19.

JOHN R. B. MASEFIELD.
T. SMITH.

MONMOUTHSHIRE.

The only portion of the county suitable for Black Grouse is the north-west (*i.e.*, the south-east portion of the South Wales Coalfield) and the adjoining Black Mountains (old Red Sandstone) to the north-east of the coalfield. This ground must have been ideal for these birds at one time, as there are dozens of wet places growing rushes—one very large bog of nearly a square mile—and scores of birch spinneys in the little branch valleys running down from the mountains.

An old man told me some years ago, that about sixty years ago, there were a few on the side of a mountain within sight of Newport, about six miles away, and that the Red Grouse were then common on the same mountain.

But the only place where I have heard of Black Grouse in the county was in the Llanthony valley. This valley and the adjoining branch valleys are almost entirely in the county of Monmouthshire, and I think there can be no doubt that they were the nesting places of the birds found on the moors and the mountains adjoining. A correspondent in the valley wrote me on April 5th, 1924, to say "I don't think there are any Black Cock or Grey Hen left now, as none have been killed for some years." Mr. W. L. Thomas, the shooting tenant of the estate, wrote me on April 9th, 1924, as follows: "I saw two Black Cock last August on the Llanthony shoot, but am doubtful if I saw a Grey Hen. Eight or nine years ago, one might frequently see half a dozen of the birds, but they appear to me to be verging on extinction altogether." Part of the Llanthony shoot is in Breconshire and part in Monmouthshire.

I think the want of better protection during the war has been the cause of these birds being reduced to a vanishing quantity in this county.

R. C. BANKS.

GLAMORGANSHIRE AND BRECONSHIRE.

So far as I am aware the Black Grouse is extremely rare in Glamorganshire. Occurrences are entirely confined to its northern edge where odd birds wander over, at very infrequent intervals, from Breconshire.

They still breed in the latter county but I believe they are not increasing in numbers, and during a couple of weeks' holiday spent near Builth Wells in 1923, I never saw a single bird.

GEOFFREY C. S. INGRAM.

LETTERS.

SONG-THRUSHES IMITATING OTHER BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the letters on this subject (*antea*, pp. 62, 88, 117, 176) there is at present in my wood at South Wooton, W. Norfolk, a Song-Thrush that exactly imitates the rippling call of the Nuthatch (*Sitta europæa*) and I have also heard it directly afterwards give a very good imitation of the song and call-notes of the Crossbill (*Loxia curvirostra*). Another Song-Thrush in my wood gives a very good imitation of a Nightingale (*Luscinia megarhyncha*) and has nearly deceived me several times.

N. TRACY.

SOUTH WOOTON, November 13th, 1924.

STARLINGS IMITATING WILLOW-WARBLER, LITTLE OWL AND KESTREL.

To the Editors of BRITISH BIRDS.

SIRS,—On December 1st, 1924, at Cambridge, I heard very distinctly the short snatch of song of the Willow-Warbler (*Phylloscopus trochilus*). It was unmistakably though somewhat imperfectly rendered and could only have proceeded from one of half-a-dozen Starlings (*Sturnus vulgaris*) near-by. I have never heard, or heard of, this song being mimicked before by Starlings; though, of several others, chief among them is the very life-like imitation of the call-note of a Little Owl (*Athene noctua*), and, more common still, the high-pitched alarm-note of a Kestrel (*Falco tinnunculus*).

G. W. THOMPSON.

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NOTES ON THE NESTING OF THE SHORT-EARED OWL IN YORKSHIRE.

BY

REV. E. A. ARMSTRONG, B.A., AND MAJOR G. W. PHILLIPS, F.Z.S.

THE nest of the Short-eared Owl (*Asio f. flammeus*) which we studied was situated under a tussock of dry grass of the previous year in the midst of an uncultivated field surrounded by ditches, which made it by no means easy of access. Indeed, although it may seem to some to be crediting the Owls with more intelligence than is their due, we could believe that they chose the situation with an eye to its strategic advantages—defended as it was on three sides by water. The locality is in the low-lands in the south of the county, where the elevation of the ground above sea-level is under 10 feet. The nest itself was not more than 30 yards distant from a sparse wood of young birch and other trees, and when we first saw it contained six eggs and was not lined.

According to the gamekeeper's observation, the Owl commenced to sit on May 5th or 6th, 1924. We have reason to believe that the last egg was laid on May 6th. When the nest was visited on the 31st of that month two young ones clothed in greyish-white down were in it. They were of the same size and were evidently just hatched. They were blind and made a low "cheeping" noise.

On our first visit to the nest (May 17th) we noted a casting close by containing a mass of beetles' elytra. We noted no such remains in any castings observed later. So far as we were able to judge, the young were fed exclusively on the short-tailed field-vole (*Microtus agrestis*).

The Owl, which we assumed to be the female, though we have no conclusive evidence on the point, sat closely, alike on the eggs, on the newly-hatched chicks and even when the two young remaining in the nest were so big that she covered only one.

The flight of the bird on leaving the nest was somewhat zig-zag. In full flight, however, the bird is a magnificent sight, sailing about like a Buzzard and sometimes attaining a great height. The wings are long, rounded, and move in slow flaps. Sometimes the Owls would shoot down with wings half-closed, through the trees of the adjoining wood into the undergrowth. On our first visit to the nest the birds never came very close to us; on later occasions they came closer but never made any attempt to menace us.

While we were photographing the young the old birds glided about overhead, one, presumably the male, striking occasionally at the other.

On our first visit we heard no call, but afterwards we frequently heard a call which sounded rather like the snappy bark of a Pomeranian, but was rather more of a croak. We write it "mwaak"; less frequently the female made a



SHORT-EARED OWL ON NEST.

(*Photographed by E. A. Armstrong and G. W. Phillips.*)

moaning sound and a young fledged bird was heard to utter a puffing note, like air suddenly escaping.

Early on May 21st we visited the nest in the hope of obtaining some photographs from the hide which had been previously erected. After about half-an-hour's wait the bird, which had been swinging past at a great speed, suddenly appeared on the ground a few feet from the nest. (We noted later that she always alighted at the same spot.) After looking anxiously in all directions for a few moments she

crept to the nest in a curious cat-like fashion, reminding us of some old, withered witch clothed in a brown speckled shawl. After settling on the eggs she gazed anxiously around for some time and gradually composed herself.

When the Owl arrived at the nest and first settled on the eggs her eyes were most striking; they appeared as great yellow globes, luminous and almost terrifying at a short distance. After composing herself, although she was still in the sunshine, she was observed deliberately and rather quickly to dilate the pupils, producing the brown appearance



YOUNG OWLS IN THE NEST, JUNE 14TH.

(*Photographed by E. A. Armstrong and G. W. Phillips.*)

which we always noticed when we approached the sitting bird.

The "ears" of the bird were only noticeable when the bird was at ease. When nervous or alarmed the feathers of the head were erected and concealed them.

On each occasion after reaching the nest and composing itself somewhat, the bird gathered the eggs carefully together, bending down and showing a great expanse of speckled neck and back, getting the beak underneath the egg and so rolling it into place.

One of us was using a noisy old-model shutter, and the method employed was to give a comparatively long exposure with a fairly small aperture. At the sound of the opening of the shutter the bird sat motionless looking in the direction of the camera, and on the second click, two or three seconds



SHORT-EARED OWL ON TREE-STUMP.

(*Photographed by E. A. Armstrong and G. W. Phillips.*)

later, she flew off. On the other hand several exposures were made with a "Compur" shutter without disturbing her at all.

When we visited the site on the 14th of June we found two young in the nest. One was considerably larger than the other, but a few brown feathers appeared amongst the down of both. They snapped their bills, blinked their yellow eyes

and hissed. There were two whole field-voles in the nest and the tail-end of a third. We went away and returned after an interval; only one owlet—the smaller—remained in the nest and the tail-end of the vole had disappeared. After some search we found the other youngster some half-dozen paces from the nest. This encouraged us to continue our search and eventually we discovered a third owlet, larger than either of the others, fully twenty paces from the nest. We do not doubt that further search would have revealed the hiding places of other young birds, the old bird having enticed them away.

On two occasions when the nest containing young was visited, the action of what we took to be the male was remarkable. He flew over the sitting bird as if in warning, and then alighting some twenty-five yards away looked towards us, shaking his half-open wings in agitation, in a manner resembling the action of a young fledged sparrow being fed, at the same time uttering what we can only describe as a chirruping call.

It was a usual thing for the old birds to perch on tree stumps. Once we watched one settle for a few moments on a green hawthorn bush, and once we flushed a young fledged bird from a similar bush.

On the 14th of July when we last visited the scene we saw several of the young birds around the nesting area. An Owl, whether an old or young bird we cannot be certain, came over with a vole gripped in its talons. This was about 10 a.m. In flight the newly fledged Owl shows considerably more light marking than the adult.

Once we noted the Owl hunting at dusk, hovering for a few seconds like a Kestrel, above the woodland.

The water-voles which abounded were not captured by the Owls.

NOTES ON SOME BIRDS OF NORTH PEMBROKE-SHIRE, 1894—1914.

BY

T. GROUND.

THE late Rev. Murray Mathew, in *The Birds of Pembrokeshire and its Islands*, treats almost entirely of the larger portion of the county lying to the south of the Preseley Hills. He appears to have been little, if at all, acquainted personally with the smaller district to the north and east, and for information in regard to it relied entirely on two papers contributed to *The Zoologist* in 1866 and 1869 by a Mr. Thomas Dix, who was resident in the north-east near Boncath.

During twenty years, from 1894 (by a coincidence, the date of publication of Mathew's book) to 1914, I paid many visits of varying duration to this district at various periods of the year, generally in spring and autumn, and the remarks which follow refer chiefly to observations on the coast and the country immediately contiguous.

This is a wild and rough country, and I agree with Mathew that there is no great profusion of bird life, but my experience of the status of certain species in the district under notice differs from his in the south, and this may serve as an excuse for the appearance of these notes, which, however, do not pretend to form a complete survey of the birds of North Pembroke. I have not met with any rare occasional visitors, unless the Bittern may be so considered.

In some cases I have for comparison introduced Mathew's remarks in brackets, followed by the initials M.M.

RAVEN (*Corvus c. corax*).—Still to be seen occasionally about the cliffs (1914).

MAGPIE (*Pica p. pica*).—Magpies enjoy here much freedom from persecution and are consequently plentiful. There are plenty of tall trees in the district, which one would have thought would have been preferred for nesting, but it more commonly made use of low, stiff, stunted, wind-blown thorn hedges and bushes in which the nests were readily accessible as far as height is concerned. So impenetrable, however, are these bristling defences that it was usually only with the aid of a stout billhook that they could be successfully raided.

CHOUGH (*Pyrhocorax pyrhocorax*).—[It is now rapidly becoming scarce. M.M.] In this district it was at least as numerous in 1914 as it was in 1894; in fact I am inclined to believe it had increased somewhat. It was frequently to be seen singly and in pairs and I have seen groups of six and even twelve. One was seen in the street at Goodwick in the early morning of May 7th, 1914.

CORN-BUNTING (*Emberiza c. calandra*).—Sparsely represented, but a few pairs were always to be found in summer; wherever I have seen it, it has always been close to the coast. I have no information of it during the winter months.

REED-BUNTING (*Emberiza s. schœniclus*).—[Resident ; scarce. M.M.] Not common, perhaps about equal in numbers to the Corn-Bunting ; frequents sandhills near the sea at times.

SKY-LARK (*Alauda a. arvensis*).—In his introduction, page xliii, Mathew says the Sky-Lark is "not abundant anywhere," but in the body of his book, page 38, he calls it "a common resident" ; it is quite a common bird in the north of the county.

YELLOW WAGTAIL (*Motacilla flavi rayi*).—[Rare and occurring only in the southern parts of the county ; good old specimens are very scarce. M.M.] Occurs also in the north in spring and probably with regularity. On May 13th, 1914, I saw a very brilliant old bird on the road running alongside the Teifi Estuary. No nest found, nor did any of the birds I saw remain more than a day or two.

GREY WAGTAIL (*Motacilla c. cinerea*).—Very common and faithfully constant to any spot it chooses for a home. When once found by stream or mill-pond, it may there be looked for with confidence year by year.

WHITE WAGTAIL (*Motacilla a. alba*).—I have several times seen the White Wagtail near the coast in May and have no doubt it is a regular spring visitor on passage. On May 14th, 1914, I had a particularly close view of one several times during the day, but did not see it after that.

MARSH-TITMOUSE (*Parus palustris dresseri*).—Not detected by Dix, but I have found it not infrequently, though it is not nearly so common as the Great, Blue and Coal-Titmice. Mathew described it as very numerous around his residence near Letterston.

RED-BACKED SHRIKE (*Lanius c. collurio*).—[Never once seen at any place in the north of the county. M.M.] Whatever may have been the case in Mathew's time, it is certain that the Red-backed Shrike bred in the north of the county regularly and not uncommonly up to 1914. I always found a few pairs in the spring and summer. In May, 1903, I saw one in the act of spearing a humble bee upon a thorn. It arrives about the second week in May ; nest with fresh eggs found June 3rd, 1909.

WILLOW-WARBLER (*Phylloscopus t. trochilus*).—[Not very common. M.M.] This species is by no means uncommon in the district and is in my opinion not much less numerous than the Chiff-chaff. This is contrary to Mathew's experience, who found the Chiffchaff "greatly in excess." Nest found twice in 1903.

WOOD-WARBLER (*Phylloscopus s. sibilatrix*).—[Scarce and very local. M.M.] Whenever I came across a coppice of young oaks with tall bare poles I always looked for this bird and rarely failed to find it—it certainly is not scarce and in this my experience agrees with that of Dix, except that he considered the beech the favourite tree.

GRASSHOPPER-WARBLER (*Locustella n. nævia*).—[Scarce and very local. M.M.] In the later years of my acquaintance with the district this species became rare ; in the early years I used always to hear two or three pairs and it was well known to the country people. In May, 1895, one of them sent me a male shot at Moylgrove, with the remark : "this is the bird that sings at night." On my last visit, May, 1914, I failed to hear it at all. A similar decrease is noted near Cardiff since 1914 by Mr. Harold Evans (*Field*, June 22nd, 1918, p. 806).

RING-OUZEL (*Turdus t. torquatus*).—In all probability breeds in small numbers on the hills. I have not myself seen it, but had in the flesh a male shot by a local farmer May 18th, 1910.

WHEATEAR (*Ænanthe æ. ænanthe*).—I have not found this bird breeding though there can be little doubt it does so ; it is scattered

through the district in the spring and summer ; male shot March 17th, 1910. More numerous in 1914 than I had ever previously noted.

WHINCHAT (*Saxicola r. rubetra*).—Far less numerous than the Stonechat, it occupies the same ground as that species ; it has happened that on one or two visits in May and June I have not seen it at all, while on other occasions two or three pairs have been noted.

STONECHAT (*Saxicola torquata hibernans*).—In 1895 Stonechats were extremely common everywhere on rough ground, but soon after that year the numbers decreased very considerably. Very hard winters seem to affect this species seriously, as might be expected, and this may perhaps account for the fluctuation in numbers ; or it may be that it is due to what may be regarded as caprice, in default of a better explanation. Nest several times found ; it breeds frequently amongst furze and rough scrub on sandhills close to the sea.

REDSTART (*Phœnicurus p. phœnicurus*).—Only once seen ; a male near Cilgerran in May, 1895, where the country is more suited to it than it is nearer the coast. Mathew describes it as extremely rare, he did not meet with it at all.

MARTIN (*Delichon u. urbica*).—Nests on the cliffs along the coast, but in smaller numbers of late years. There used to be a colony of about thirty nests on the cliffs below the coastguard station at Penrhyn Castle, but this in May, 1914, was reduced to one nest and I was not quite sure that that was occupied. Perhaps this site had been deserted for some reason other than numerical decline, but the species seemed less abundant than formerly.

LONG-EARED OWL (*Asio o. otus*).—[A winter visitor ; scarce. Not included in Dix's list. M.M.] It is possible that the Long-eared Owl is a resident in Pembrokeshire, but, if so, it must be in very small numbers. I have no note of it in the winter. On May 30th, 1912, I flushed an old bird and three half-grown young in a small copse at Granant. One of the young I secured and am thus able to record the nesting of this bird in the county.

SHORT-EARED OWL (*Asio f. flammeus*).—I have no note of the Short-eared Owl in summer ; in winter one was shot September 25th, 1895, and another in December, 1904.

TAWNY OWL (*Strix aluco sylvatica*).—Very common. In autumn soon after dawn I used to see them dozing in the woods, sitting always close to the boles of the trees, appearing at a little distance like bosses or excrescences of the trunk itself.

BARN-OWL (*Tyto a. alba*).—This Owl I met with on several occasions, but it was by no means common. I saw one that had been shot by a fisherman February 5th, 1910.

PEREGRINE FALCON (*Falco p. peregrinus*).—The status of this bird was much the same as that of the Buzzard. A young female was shot July 25th, 1895 ; a pair September 18th, 1897. I have heard of eggs having been taken but have never seen any. In May, 1914, I saw a pair almost daily and one day disturbed the female trying to pick something up from the sea. It proved to be a tame pigeon, decapitated and half eaten.

KESTREL (*Falco t. tinnunculus*).—The Kestrel is known locally as the " Red Hawk," while the Sparrow-Hawk is the " Blue Hawk." I have never found it using the woods for nesting, possibly because there is plenty of accommodation in the cliffs. It was quite a common bird but outnumbered by the Sparrow-Hawk.

BUZZARD (*Buteo b. buteo*).—Nests of this species were reported sometimes, but though I never had evidence of eggs being taken, I have often seen the birds about the cliffs in May and June, and once got

close to two young birds playing about on some rails at the top of a cliff.

SPARROW-HAWK (*Accipiter n. nisus*).—Too numerous; nested in nearly every wood, particularly in those composed chiefly of larch. The nests I found were invariably placed about half-way up the tree and close to the trunk. Clutches have always been small, never more than five.

BITTERN (*Botaurus s. stellaris*).—[Now a very rare bird in Pembroke-shire. M.M.] A Bittern which I saw in the flesh was shot on the Teifi, January 14th, 1908, by a local fisherman. In June, 1909, I called upon Jefferys, bird-stuffer in Haverfordwest, and having in mind Mathew's words quoted above, was surprised to see several Bitterns stuffed in his shop. He told me he did not consider it at all a rare bird, and it would seem that it is of more common occurrence than Mathew supposed.

BRENT GOOSE (*Branta bernicla*).—Visits the Teifi Estuary in the winter; I had two that were shot there February 2nd, 1912.

SHELD-DUCK (*Tadorna tadorna*).—Two shot in the Teifi Estuary January 8th, 1908; not often seen. There were none nesting on the sandhills bordering the Teifi Estuary, and Mathew's evidence that it had bred in the county at all is slight, resting on a statement of Dix that "a pair or two nest on sandhills below Milford Haven."

WIGEON (*Anas penelope*).—I put up a small "company" of eight out of a streamlet running into the Teifi in September, 1894; doubtless a regular winter visitor.

SCOTER (*Oidemia n. nigra*).—An old male in perfect plumage sent to me, shot March 29th, 1912.

RED-BREASTED MERGANSER (*Mergus serrator*).—[A winter visitor; rare. We know of no recent occurrence. M.M.] One was shot on the Teifi Estuary October 20th, 1909; an immature male.

MANX SHEARWATER (*Puffinus ϕ . puffinus*).—Often seen by day at sea off the Teifi mouth; a pair shot there July, 1904.

GREAT CRESTED GREBE (*Podiceps c. cristatus*).—[A winter visitor; not very common. M.M.] Not at all uncommon in winter. I have had several instances of their capture at that season; a Cardigan resident told me he shot one as far up the river as that place.

RED-THROATED DIVER (*Colymbus stellatus*).—Not uncommon in the winter; I have had several sent me at that season, e.g., January and December, 1907, and December, 1909.

OYSTER-CATCHER (*Hæmatopus o. ostralegus*).—Nests amongst the rocks near Penrhyn Castle, also at Caebwr, Granant, and elsewhere. Seen in the Teifi Estuary at all times of the year.

GOLDEN PLOVER (*Charadrius apricarius*).—Two shot April 7th, 1896, one of them with black breast. I did not see them on the Teifi Estuary at any time.

GREY PLOVER (*Squatarola s. squatarola*).—An autumn and winter visitor to the Teifi Estuary; I have only seen single birds. I shot one in September, 1894, and another on December 26th, 1896.

TURNSTONE (*Arenaria i. interpres*).—[Autumn visitor; rather rare. No record of one in spring in nesting dress. M.M.] Not uncommon in spring in breeding plumage at the mouth of the Teifi. Some numbers were there in May, 1895, and also on May 31st, 1905. In autumn there were sometimes flocks of considerable size. On September 5th, 1913, I shot two out of perhaps 100 to 200 birds. It was anything but rare on this coast.

SANDERLING (*Crocethia alba*).—[An autumn visitor; scarce. Also sometimes in spring. M.M.] The Sanderling visits the Teifi Estuary

with great regularity in spring and autumn, at both seasons freely but especially so in autumn. It arrives in spring about the third week in May.

KNOT (*Calidris c. canutus*).—Rarely seen; one shot December, 1896.

DUNLIN (*Calidris alpina*).—Very common on the Teifi Estuary both in spring and autumn, and some may be found there at all times.

CURLEW-SANDPIPER (*Calidris testacea*).—Occasionally a few of these were detected amongst Dunlins and other small Waders in autumn, the only season in which I have met with it. I shot one in September, 1894.

PURPLE SANDPIPER (*Calidris m. maritima*).—[An autumn visitor. M.M.]—I have no note of this in autumn, it seemed rather to be a winter visitor on this coast. Four were shot during hard weather, and more seen on January 29th, 1907, by a fisherman who sent them to me, remarking that they were not often seen on this coast.

REDSHANK (*Tringa t. totanus*).—A regular visitor in autumn; never in large numbers.

GREENSHANK (*Tringa nebularia*).—I know of only one instance of the Greenshank occurring in the Teifi Estuary. One was shot October 16th, 1909, by a visitor from Bristol and sent to me for identification.

BAR-TAILED GODWIT (*Limosa l. lapponica*).—[An autumn visitor and occasionally in spring. M.M.] I have shot this Godwit in September but have never seen it in the district in spring. It has also been obtained in October, 1909; January 23rd, 1905, and January 31st, 1907; so that it also remains during the winter; occurs only in small parties.

WHIMBREL (*Numenius p. phaeopus*).—A few Whimbrel regularly visit the Teifi in May and remain some weeks.

GREAT BLACK-BACKED GULL (*Larus marinus*).—A pair reported nesting on an isolated rock at Caebwr on May 16th, 1914. I subsequently saw one of these birds apparently covering eggs on the top of this rock with the other bird close at hand. The rock, however, being precipitous and unscaleable I could not make sure; I have little doubt a nest was there. This is the only instance I know of its breeding in the district; on the Teifi they are not infrequent; twelve fine old pairs seen together there September 10th, 1913.

BLACK GUILLEMOT (*Uria g. grylle*).—In July, 1914, Mr. F. G. Paley of Malvern was spending a holiday at my old haunt in this district, when he wrote to me that he had been out in a boat with a local fisherman and that they had seen a bird that neither of them could identify. "It was," he said, "like a Guillemot but smaller, black all over with a white patch on either wing," a description that reads like nothing so much as that of the Black Guillemot.

The man referred to is one who has accompanied me for many years in my excursions about the coast and who knows the Common Guillemot and all the local sea-birds well, and he subsequently confirmed Mr. Paley's statement to me. Mr. Paley, though no ornithologist, takes considerable interest in birds, and being at my house shortly afterwards picked out the Black Guillemot from the birds in my collection, saying he was quite certain that was the bird they saw.

I give this evidence for what it is worth, and if it is not quite conclusive the incident is significant in view of Montagu's assertion that he found the Black Guillemot breeding at Tenby (Orn. Dict. 1802). In the *Birds of Devon*, p. 429, Mathew questions the accuracy of Montagu's statement *in toto*, but if Mr. Paley's observation is reliable, and I believe it to be so, it certainly supports it on the theory that the species is displaying a tendency to revisit an ancient habitat. It would be

interesting if it should be found to be again breeding in Pembrokeshire after so long an interval.

PUFFIN (*Fratercula arctica grabæ*).—So far as I know there is no colony of Puffins in this part of Pembrokeshire. There is one on Cardigan Island on the other side of the Teifi, which in 1895 was fairly considerable. Since then it has varied greatly, and in 1914 was much reduced. Known locally as the "Welsh Parrot."

LAND-RAIL (*Crex crex*).—I heard it many times but less frequently of later years, once only in 1914.

WATER-RAIL (*Rallus a. aquaticus*).—Only one instance, a male shot October 13th, 1906; very probably it is more numerous than this would seem to indicate. It wants looking for and Mathew found it common.

MOORHEN (*Gallinula c. chloropus*).—[Dix expresses surprise at their rareness. M.M.] I found this species very common as Mathew did; nest is often in bushes at a height above water, in one case $9\frac{1}{2}$ feet.

RED-LEGGED PARTRIDGE (*Alectoris r. rufa*).—I received one November 23rd, 1910, that had been shot near St. Dogmaels. Mathew only knew of one that had been obtained "at large anywhere within the county." It had been introduced at Fishguard without success. Perhaps it has been re-introduced.

SOME NOTES TAKEN AT THE EYRIE OF A GOLDEN EAGLE.

BY

SETON AND AUDREY GORDON.

ON May 10th, 1924, we were shown the eyrie of a Golden Eagle (*Aquila ch. chrysaëtus*) situated on a very steep grass and rock hillside which formed a gorge down which a small burn flowed. The eyrie was built on the trunk of a tree growing horizontally out of a precipitous part of the hillside. It was a large and very deep structure, many years old.

About 17 ft. to one side was a small ledge which we were able to enlarge sufficiently to hold a hiding tent.

On May 10th there was one unfertile egg and one eaglet probably one week old. In the nest were two very young lambs and one rabbit.

On this occasion we placed a few branches on the prepared ledge and instructed the shepherd to add a few more every other day till we came back.

We returned on May 17th, erected a canvas hide on the ledge and covered it with branches, moss, etc. The "hide watcher" was left in the hide at 10.40 a.m., British summer time. The following are the notes taken in the hide: Mist and rain, eaglet cheeping incessantly. 11.30. Eagle arrived, first perching on trees near the eyrie, then jumping on to the eyrie. First she appeared to eat some white objects from under the eaglet, possibly maggots, then she slowly and very carefully settled down to brood it. Cheeping stopped at once and the Eagle went to sleep with head-feathers ruffled up. 11.45. Plate exposed and the bird did not even notice the sound of shutter or changing plates. 12.50. Eagle seems to be expecting something. 12.55. Eagle stood up, walked over to the lambs, tore small pieces off and very gently reached over and gave them to the eaglet in her beak. If the morsel proved too big for it the Eagle ate it herself. At 1.10 she settled down again to brood the eaglet. Raining hard, raindrops lying on Eagle's feathers. 2.20. She looks down under her at the eaglet, shakes herself and settles down once more. 2.35. Eagle sound asleep, eyes closed, head lowered. A Redstart singing wakes her with a start. 2.43. She listens and looks up. (2.50 Eagle was seen passing over near the nest by the "outside watcher" half a mile away.) 3.5. She dozes off again. At 5 p.m. the "hide watcher" was relieved after six and a half hours' vigil.

May 18th. "Hide watcher" left in the hide 11.40 a.m. summer time. Lovely day, sun just shining on the edge of the eyrie. Eaglet not cheeping—probably cold made it pceevish yesterday. No fresh food, lambs smelling very



GOLDEN EAGLE BROODING EAGLET IN RAIN.

Note rain drops on her feathers and raised head-feathers;

(*Photographed by S. and A. Gordon.*)

"high." 12.20 Eagle arrived. Fed the eaglet at once, then brooded but watchful till 1.5 p.m. Yawned at times. Left the nest. ("Outside watcher" saw it flying round above the nest and seemingly drop to nest 1.17.) "Hide watcher" noted its return to eyrie 1.30. 2.5. It again flew off. 2.30.

Returned and fed eaglet. 2.50. Flew off again taking remains of lamb's leg, returned two minutes later, rooted about in the lining of the nest and picked up a dirty stick, then commenced to cover the eaglet. Caught at flies which



GOLDEN EAGLE JUST ARRIVED AT THE EYRIE.

(*Photographed by S. and A. Gordon.*)

worried it. Continued to brood till 3.53 then off again, disturbed by a bleating sheep. (4 p.m. the "outside watcher" saw an Eagle on the extreme top of a 2,000 ft. hill on opposite side of the glen, then it commenced to hunt and was lost to view.) "Hide watcher"—4.30. Eaglet cheeping. 4.47.

Eagle returned to trees near eyrie. 4.50. Came on to nest with bunch of heather. Fed herself, swallowed a large bone, then fed eaglet. 5.15. Brooding. 5.18. Sprang out into the air with an upward spring and went off. (5.30 "outside watcher" saw an Eagle on a small knoll near the nest preening its feathers, then it started hunting—flying westwards—met two Eagles coming from the west, one joined it and the other turned back. The two together went away out of sight.) By 7.30 "hide watcher" was relieved and Eagle had not returned. It had therefore been away from the nest just over two hours.

May 19th. Still no fresh food in the eyrie. In the hide from 9.37 to 1.30. 10.40. Eagle returned with fresh branch of birch. Fed eaglet as before and again at 12.12, brooding it in the interval. Fine sunny day again.

We were particularly struck during our three days' watch by the constant absence of the mate and the fact that no fresh food was brought. We intended to return in a fortnight's time to obtain further photographs, but unfortunately on May 24th the eaglet mysteriously disappeared and no trace of it could be found. A freshly killed Ptarmigan was lying in the nest. The Eagle had last been seen brooding on May 21st.

The great gentleness and care with which the Eagle fed the chick was very noticeable, also its great strength and size compared with the tiny weak eaglet.

The only time the mate was seen hunting was between 12.30 and 1 p.m. on 18th, when the other bird was on the nest. At other times the hunting Eagle seen by the "outside watcher" must have been the one which had been on the nest. It was very curious also to see two Eagles being met by the one from the nest. Is it possible that the cock Eagle in this instance was polygamous?

NOTES

NOTES FROM STAFFORDSHIRE, 1924.

DURING 1924 I visited on a number of occasions the most westerly of the large Staffordshire reservoirs to which my notes in Vol. XVII. (pp. 139-142) referred.

Duck were represented in very much the same proportions and numbers as in 1923, with Wigeon (*Anas penelope*), Mallards (*A. platyrhyncha*) and Teal (*A. crecca*) by far the most plentiful; Goldeneyes (*Bucephala clangula*) were possibly in rather greater numbers and there was a slight reduction in the number of Shovelers (*Spatula clypeata*).

Great-crested Grebes (*Podiceps c. cristatus*) were never absent even in January and December, and were most plentiful in the first week of October, when there cannot have been many less than a hundred scattered over the water.

Gulls, which are always so plentiful on the Cheshire meres, were seldom seen in 1923; in 1924 there were always between twenty and thirty Black-headed Gulls (*Larus ridibundus*) from the end of August to the end of December and a few in February.

The following are, perhaps, worthy of note:—

WHITE-FRONTED GOOSE (*Anser albifrons*).—On January 2nd I watched one flying over from the east at some height; after flying up and down the reservoir at a great pace several times, it dropped to the water for a few minutes, but soon took to flight again.

GADWALL (*Anas strepera*).—On August 30th my wife and I had a remarkably good view of five, with yellow bills, both on the wing and on the water, which kept very close together and certainly looked like a brood of young, bred locally. Again on November 22nd we saw four: one an adult drake and the others ducks or immature birds.

PINTAIL (*Anas a. acuta*).—Two adult drakes and a duck on February 3rd.

GARGANEY (*Anas querquedula*).—On March 30th a pair at Gailey Pools, where I first watched them on the bank and later in flight. In 1923 I first saw Garganeys in Staffs. on March 31st, and in 1922 in Cheshire on March 26th.

GOOSANDER (*Mergus m. merganser*).—On February 3rd four, and on March 30th one—all brown-headed birds.

SMEW (*Mergus albellus*).—One brown-headed bird on February 3rd; on December 24th there were three, also

brown-headed birds, which possibly included both sexes, as one differed from the other two in having a lighter brown cap; they flew about wildly and finally swam very close together.

BLACK-NECKED GREBE (*Podiceps n. nigricollis*).—Seen for the last three months of the year. On October 4th and 5th there were three, two of which were still black-necked, whereas the front of the neck of the third was whitish. On November 22nd we saw only one, but on December 7th there were two, one of which was whiter on the face than the other; the upper mandible of one of them was more definitely and noticeably upturned than in any Black-necked Grebe I have ever seen, and that of the other looked comparatively straight. This seems to be a rather variable character. Does it alter with age?

WHIMBREL (*Numenius p. phaeopus*).—On August 30th two flew over at some height passing from east to west and calling frequently. A. W. BOYD.

MARSH-WARBLER IN LONDON.

ON June 5th, 1924, I was walking by the Long Water in Kensington Gardens, when I became aware of a Warbler singing in the bushes at the head of the water. For a moment I thought it was Sedge-, and then for another moment Reed-, but I very soon recognised the unmistakable sweet phrases that distinguish the song of the Marsh-Warbler (*Acrocephalus palustris*). I leant over the parapet at the top of the Long Water and listened to it singing in the bottom of a bush within six or eight yards of me for several minutes. Then a flock of Sparrows came into the bushes. Their arrival excited the Marsh-Warbler, which thereupon came up towards them and drove them away, hurling snatches of song at them. It came nearly to the top of the bushes, and then crept through and down again, passing within three yards of where I stood, so that I had an excellent view of its uniformly olivaceous upper-plumage.

I understand that a Sedge-Warbler had been heard there a few days earlier, but I cannot discover that any London ornithologist heard the Marsh-Warbler. I do not know if this is the first recorded occurrence in London. H. G. ALEXANDER.

HEN-HARRIER IN ESSEX.

ON December 20th, 1924, I identified a male Hen-Harrier (*Circus cyaneus*) at the entrance to Hamford Water, Essex. When first seen it was taken by surprise and I obtained a very

close view of it. Unfortunately it was between myself and the light, which was not good, and when I got my glass on to it the only colour I could distinguish was a white rump, but this was seen clearly and unmistakably. The Harrier flew over the sea-wall to the landward side and disappeared, apparently having alighted. I approached the wall carefully but could not see the bird, so proceeded to work the extensive marsh. Without success, I had almost retraced my steps to the wall when it rose some distance to my right and still against the light. Fortunately it flew in a wide semicircle, altering its position in relation to the light, and, the sun having come out, I could see a silvery-grey mantle and black primaries. During this flight (as I have often seen the Marsh-Harrier fly when hunting) periods of flying alternated with periods of sailing. Afterwards I had still better views of the bird's plumage as it flew over the open marsh. Apparently this species has been recorded in the county only once since the publication of *The Birds of Essex* in 1890.

WILLIAM E. GLEGG.

SPOONBILL IN ANGLESEY.

“ J.W.D.” records in the *Sporting Times* of May 10th, 1924, “ a male Spoonbill in fine plumage in Anglesey ” which up to that date had escaped from being shot. “ Perhaps what was most noticeable was his very dignified walk and the peculiar sideway action of the enormous bill as he ploughed the water and mud of the small pools in search of food. Two Spoonbills were killed near Holyhead in 1832.”

This last statement is rather surprising as I have no record of the event in my *Vert. Fauna of N. Wales*, although I searched all likely sources of information when preparing the work.

To return to the above occurrence in Anglesey. I can now add that on June 1st, 1924, my friend, Rev. E. Lorimer Thomas, watched a Spoonbill (*Platalea leucorodia*) for several hours feeding upon the mud-flats near Valley Station. This was probably the same bird as the one recorded in the *Sporting Times* three weeks earlier.

H. E. FORREST.

SMEW IN LONDON.

FOR the last few winters Smew (*Mergus albellus*) have frequented the reservoirs in the neighbourhood of Hammersmith Bridge. In 1924 I first saw them there on November 22nd, as compared with December 8th in 1923, and December 16th in 1922. To-day (December 20th), I watched fifteen of them, including one old drake. If undisturbed they will probably

stay till the middle of March. Shortly before their departure last spring they sometimes left the reservoirs, and might be seen swimming and diving in the Thames, usually off Chiswick Eyot.

A. HOLTE MACPHERSON.

THE MAXIMUM CLUTCH OF THE GULL-BILLED TERN.

IN Mr. W. E. Glegg's interesting article on the Nesting of the Gull-billed Tern (*Gelochelidon n. nilotica*) in the Camargue, after describing the discovery of four nests with four eggs and four with five, he says "I think this is the first occasion on which clutches of five of the Gull-billed Tern have been recorded and even those of four are unusual" (*antea*, p. 206). It is, however, not the first time that five eggs of the Gull-billed Tern have been found in a nest, for H. T. Hagerup, writing in the *Ornith. Monatschrift*, 1894, p. 151, describes a colony breeding in Limfjord, Jutland, which he visited in 1885. Two nests in this colony contained five eggs and on the edge of one nest lay a sixth egg, but both these cases were ascribed by him to two females laying in the same nest. O. Haase (*Ornith. Monatsber.*, 1906, p. 20) also attributed a clutch of four met with in the Ringkjöbing Fjord to the same cause. Out of a large number of nests examined in Spain personally, none contained more than three eggs.

F. C. R. JOURDAIN.

TIME-PERIOD FOR NEST AND EGG REPLACEMENT.

THE nest of a Carrion-Crow (*C. c. corone*) was taken on April 23rd, 1924, containing five fresh eggs. On May 5th another nest had been built and contained four fresh eggs (interval twelve days). The nest of another pair was taken with five fresh eggs on April 26th, and on May 14th another nest with three fresh eggs was found (interval seventeen days). The Carrion-Crows in Somersetshire always build again if taken, but I have never known one to lay in the same nest after being robbed.

JOSEPH H. SYMES.

LATE NESTING OF SWALLOW IN PERTHSHIRE.—Lord Scone informs us that on September 20th, 1924, he ringed three young Swallows (*Hirundo r. rustica*) that were about to leave the nest near Perth.

LATE NESTING OF HOUSE-MARTIN IN CAMBRIDGESHIRE.—Dr. A. Steven Corbet writes that a pair of House-Martins (*Delichon u. urbica*) were feeding young in a nest at Fulbourn, Cambs., on October 4th, 1924.



REVIEWS

The Borders and Beyond. Arctic . . . Cheviot . . . Tropic. By Abel Chapman. With 19 coloured plates by W. H. Riddell and 170 sketches by the author. (Gurney & Jackson.) 25s. net.

MR. ABEL CHAPMAN knows well how to make an attractive book, and his bold, trenchant style is not the least of his attractions as a writer, though as a naturalist this often leads him into making statements, which, though extremely positive, are often the less convincing.

To ornithologists perhaps the most interesting chapters of this book will be those devoted to the birds the author dubs "globe-spanners," in which are included Curlew-Sandpiper, Little Stint, Sanderling, Knot, Grey Plover and Bar-tailed Godwit. But here, as elsewhere, Mr. Chapman must be read with discrimination. He says, for instance, of the Curlew-Sandpiper, that "many" coming from the Taimyr travel on from England to Patagonia, but the bird is only occasional in South America, which it most likely reaches through North America, where it is also sometimes found; nor do we agree with the statement on the same page (62) that "never an adult" is to be found on our shores in September. In these chapters we find much of interest (though exact details are unfortunately lacking) concerning waders which do not attain adult plumage in their first year. But the author is wrong in claiming to be the first to notice this, and he is also wrong in supposing that all individuals of certain species do not attain adult plumage in their first year. Evidently Mr. Chapman has been able to obtain material which the existing laws deny to those less fortunate, or perhaps less bold, but careful examination of such spring specimens as are to be found in collections proves that some individuals attain a plumage distinguishable from the adult in summer only by certain small but recognizable characters of the juvenile, while others acquire only a very partial adult garb and others moult in spring into a plumage which is like their first winter (cf. *Practical Handbook*). The problem is, therefore, a much more complicated one than Mr. Chapman imagines, and the whole subject is one which still requires much investigation. Regarding the age at which birds breed (whether they have attained adult plumage or not) there is not much really good evidence. We know that certain Hawks do breed when just a year old and while still in their juvenile plumage. Gulls, on the other hand, do not until they have attained adult plumage, though immature birds have occasionally been suspected of doing so. Wild Mallard and Teal may breed in their first year, as stated by the author on page 220, but we should have liked the proof of this. Ringing has proved that certain individuals, e.g. of Starlings, do breed in their first year; on the other hand, the present writer has dissected a number of Starlings in their first summer (approximately a year old) which were not breeding. It may be that in certain species this is to some extent an individual question, but comparatively few facts have been recorded and the subject provides a good field for investigation.

Of the Curlew Mr. Chapman states (Chapter XVII.) that the present-day view of its status is that it is "a *resident*, which spends the spring and summer on the moors, but retires to the coast in autumn and winter." But this is not at all the present-day view (see, for example,

the *Practical Handbook*), and ornithological works after the time of Newton and Saunders seem to be ignored by Mr. Chapman. He goes on to observe that Curlews arrive on the moors in mid-February and by their demeanour have obviously come from afar, while those on the coast are as numerous as ever and eventually leave for overseas months later. This is good circumstantial evidence, but it by no means proves nor do we know that "our home Curlews each autumn occupy the whole continent of Africa"! The utmost we can say for certain is that some of our home-bred Curlews migrate to Ireland (see *Brit. B.*, XIII., p. 309), and it seems likely that they are partial migrants like Lapwings and Woodcock. On page 256 we find the statement that Curlews become of a more rufous hue in the spring "by a suffusion of warmer colour into the living feather" and not by a moult, but we know that they do in fact moult from February to May.

We have said enough to show that Mr. Chapman often lays himself open to criticism, and his scorn for modern work in ornithology has perhaps prevented him from availing himself of some of its results. This is not to say that the book is not well worth reading, for it contains many observations of interest and value. It is a pity, however, that an excellent field-naturalist such as the author should abuse the systematic work of brother ornithologists, especially as it is quite clear that he has not himself studied this highly necessary branch of our science, and does not understand either its methods or principles. He pours ridicule, for instance, on modern ideas of nomenclature and the necessary changing of names, yet on page 126 he himself burdens our synonymy with a new name, "*Charadrius calceatus*," for the Grey Plover, because, forsooth, he does not like either the *squatarola* or *helvetica* of Linnæus!

The illustrations are admirable, and we can especially commend the coloured plates by Mr. Riddell, which are amongst the best we have seen.

The Natural History of Selborne. By Gilbert White. With notes by Richard Kearton. Illustrated with photographs. (Arrowsmith Ltd.) 21s. net.

THIS is a nicely produced edition of the great classic with appropriate notes by Mr. Kearton. The photographic illustrations are very excellent and depict many of the creatures as well as the favourite places mentioned in the letters, and incongruous as modern photographs of birds may seem side by side with the quiet observations of the old-time naturalist, there can be no doubt that Gilbert White himself would have delighted in them.

British Sporting Birds. Edited by F. B. Kirkman and Horace G. Hutchinson. (T. C. & E. C. Jack Ltd.) Illustrated in colour and from photographs. 30s. net.

THIS book is made up of sections reprinted from the well-known *British Bird Book* with chapters added on Pheasant and Partridge Shooting by Mr. Hutchinson; Grouse, Capercaillie and Ptarmigan Shooting by the Hon. D. Cairns; Woodcock and Snipe Shooting by Mr. J. H. Wyatt; Wildfowl Shooting by Mr. Max Baker; Pigeon Shooting by Mr. W. J. Malden, and Plover and Curlew Shooting by Major H. B. C. Pollard. These chapters are pleasantly written and

informative, but the point of view of the authors is sometimes antagonistic to the sentiments expressed by some of the writers in the *British Bird Book*. In the Plover section it is a pity that such birds as the Dotterel and Kentish Plover are included, and it is to be hoped that they will never be regarded as "sporting" birds. Altogether this makes a handsome volume and should be acceptable to the sportsman who wishes to have information not only on shooting but also on the natural history of the birds he shoots.

Secrets of Bird Life. By H. A. Gilbert and Arthur Brook. (Arrow-smith.) Illustrated with photographs. 10s. net.

THE ostensible purpose of this book is to interest people in birds through the medium of photography, which is here treated as a sport. Mr. Gilbert, who we imagine is responsible for the letterpress, writes in a breezy style and Mr. Brook is without doubt a most successful photographer. Although much of the book is occupied with the finding of nests and ways of circumventing their owners to photograph them—the "sporting" part of the pursuit—there is something to be gleaned here and there about the habits of the birds. The chapters on the Greenshank, Raven and Buzzard seem to us the best. We hope the authors are not correct in putting the number of Kites now living at only fourteen. The Raven is considered to have increased greatly during the last ten years, and in 1924 the authors state they knew of a nest in a tree in the middle of England. It is thought that in the Greenshank both sexes incubate, but proof of this was not obtained. The photographs form a most attractive "bag," and the book as a whole is likely to attract adherents to this form of "sport," some of whom may, it is hoped, develop into useful observers of bird life.



LETTERS

GREAT TIT IMITATING OTHER BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—On November 6th, 1924, I heard a Great Tit (*Parus major*) imitate the call-note of the Willow-Warbler (*Phylloscopus trochilus*). The note was perfect and several times repeated. I could find no other bird and after the Tit had fled I did not again hear the note. I was then reminded that I had previously heard a Great Tit imitate others and looked up the note, which was as follows: "February 3rd, 1918. This morning mobbed by Great Tit, which came nearer and nearer uttering notes which I took to be those of other birds, *i.e.*, Chaffinch and Hedge-Sparrow, as well as his own. The deception was very good, and what was particularly noticeable was the ventriloquial effect, for when the note changed from the true Tit note to that of another the sound seemed to come from another part of the tree. The tree was a leafless beech, so that I could plainly see there was no other bird about."

T. J. BEESTON.

ALBINISTIC REDBREAST IN KENT.

To the Editors of BRITISH BIRDS.

SIRS,—Now that it has disappeared, having probably met its inevitable fate, I would like to put on record a very beautiful albinistic Robin (*Erithacus rubecula*). For some months it haunted the precincts of a small cottage in Benenden, Kent, and was so tame that one could easily approach within a few feet of it. The breast was very faintly washed with rusty-orange, otherwise the bird was almost pure white. Its eyes were normal, and, in contrast with its plumage, looked an intense black. From its manners and song there can be little doubt that it was a male.

COLLINGWOOD INGRAM.

BENENDEN, December 25th, 1924.



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A STUDY OF THE ROBIN BY MEANS OF
MARKED BIRDS (THIRD PAPER).*

BY

J. P. BURKITT.

I AM now able to continue the results of my study of Robins (*Erithacus r. melophilus*) (see Vol. XVII., p. 294, Vol. XVIII., p. 97) from where I left off at the end of May, 1924, up to December 21st, 1924. I think I have reached a stage where it is not altogether unreasonable and where it would certainly be more helpful to the reader if I preface this paper by some more or less tentative findings from my study:—

- A. A male normally retains the whole or part of his breeding territory throughout the year, and from year to year.
- B. Most females remain in the breeding territory for the moult or for the greater part of it.
- C. Towards the end of the moult there grows an estrangement between the male and female of a pair.
- D. All the female parents wander; mostly towards the end of or after the moult, occasionally before it.
- E. This wandering may not be very far, as it may end in (a return and) taking up a territory in the near neighbourhood, or even in the breeding site, if there be a vacancy, by the end of September or in October.
- F. Most young birds after leaving the parents wander without any sense of territory. Probably each breeding season finally results in comparatively few surviving young birds, say less than one to each pair. A few young birds acquire territory before October. The remainder probably try to get territories mainly towards the end of October and part of November.
- G. Females appear to wander again early in the new year and on to the end of March.
- H. Probably the requirements of late autumn birds seeking territory are never all completely satisfied and stabilized before the spring movement commences.
- I. Probably every female sings an occasional bar during her sole occupation of a territory; but the total of such song is almost negligible. Any appreciable song heard frequently from a Robin seems to surely denote a male.

I shall now proceed to enlarge on the above propositions.

* For previous papers see Vol. XVII. pp. 294-303; Vol. XVIII., pp. 97-103.

(A) The only exceptions in my study to proposition "A" are the cases of one male parent (17) in 1923 and one (32) in 1924 which disappeared after their breeding season. 32 was on my outskirts and may possibly have side-slipped out of my ken without really going away. And of course there is always the chance of death or some special adversity. (For further corroboration see Lord Grey's letter below.) My 1923-4 experience suggests that I might go further than proposition "A" and say that not only breeding males but young males who acquire autumn territories persist in their sites. I have not yet had any known case of a male resident, young or old, leaving me in spring; but I need more positive evidence. In that case there would be no spring movement of males. Against this was the apparent arrival of two males to unoccupied ground here in March, 1923 (p. 98 above). (Note that the male arrival in February on p. 97 is an error, as the table on p. 103 will show.) There is just a chance I may have been wrong in considering the above ground unoccupied, as it was rather outside my usual beat at that time.

(B) The first signs of moult, showing like wet spots on the throat, were noticed in various birds in 1924 on dates between June 13th and July 4th. Two or three weeks later the birds were without a tail. A new tail appeared to be fully grown by a further fortnight or less. I made no observations between August 3rd and 22nd, but on the latter date four birds (at least) showed a light buff frontal band between the eyes, evidently a precursor to the new red band there. The last part to show moult seemed to be the back of the head and of the neck, which in several birds was still in evidence in the last days of August. So that the moult did not seem completely over for all birds till the second week in September. Indeed, in rare cases, it may not be over till the end of September. If it had not been that I had trained the birds to expect food from me at exposed feeding boards I should never have seen them and known they were there and been able to study them during moult. In this respect I had an immense advantage over my observations of this time last year. I was able to keep in regular touch with most of the birds. During heavy moult the birds came from the undergrowth to the feeding board and returned into it again; there was no open flying.

The females were less frequently enticed from concealment than the males. Of eight females, two appeared to be wandering from their territory just before the moult; all

the rest were seen in their territory during at least part of the moult and at least three of these remained through the moult.

(c) I saw estrangement between male and female in two cases at least. The following is one of them :

On July 30th, that is, late in the moult, the male and female came to the feeding board ; the male retired. When they were next observed together, on August 22nd, the male drove the female from the food when he wanted it, but not otherwise. She left the territory and was not seen again in my area till October 4th, when she returned to a territory alongside. She then wanted to feed at the male's board, having been used to it before, but he chased her away to her own ground. Later on I saw the female chasing the male from *her* ground.

(D) (E) Two females appeared to be wandering *before* the moult. One of these was the female which arrived to male 9 (see previous table) on June 13th. It was building a nest a few days later but disappeared when the nest was half made about June 24th. Conceivably moulting set in and interfered. The other female wanderer, just before moult, was 14. She had evidently dissolved partnership with her mate, 18 M., and appeared to be "on the loose" on or before June 14th. Her young, which I had last seen in the nest, would have been barely a week out of the nest by then. 9 M. did not object to her being in his territory, nor did she seem to take any notice of him. She was last seen on June 24th. She then showed beginnings of moult.

Now as to females wandering during or after the moult. A female, 37, had left her breeding territory and was caught 120 yards away without a tail on July 27th, but has not been seen since. I had re-caught her in mistake for another. Two other females, 11 and 40, were seen and in moult in their breeding territories on July 24th and June 14th respectively, but have not been seen since. Another female, 27, left her breeding territory after the moult, about August 22nd, and was not seen till she returned on October 4th to take up a vacant territory alongside the breeding one. She has been there since. Another female, 34, was seen in her breeding territory on July 29th, but was not seen again till September 21st, when she was found occupying ground about 120 yards from the breeding territory. In fact, it was part of an adjoining territory from which the female had gone. Another female, 35, not noticed since early June, was found in occupation of a territory 400 yards away on October 12th. This latter territory was in ground

newly included in my observations. She remained in constant ownership till December 1st, since when she has not been seen. There was no apparent reason for this latter disappearance as she left no successor.

Thus, out of seven marked females, three were found again in my area of observation, four disappeared. The dates of apparent reappearance were September 21st, October 4th, October 12th. Compare this with my 1923 experience in the disappearance of 13 F. and in the return of 15 F. to her original territory on October 14th of that year, and in the arrival of 27 F. on November 5th.

(F) Several young of a brood may be seen being fed in the hedges by the parents, but these young soon disappear. One catches sight of a young bird frequently in June, July or August, apparently wandering about. They do not seem to recognize territory or to be taken seriously by the adults. They, like the wandering females, would probably like to exhibit themselves as little as possible, and work along under cover. This autumn, on an area covered during the breeding season by nine pairs and two unpaired birds, only five young birds acquired territory during their period of youthful plumage (that was before the middle of September) and one in adult plumage in the same period, which I guessed from its habits to be young; while of these six, two (42, 46) disappeared from their territories later and were replaced by other birds.

After the middle of September at latest one is most unlikely to be able to know a young bird by its plumage. But October and part of November is notable for seeing some new birds about, a few of which acquire abiding sites, the rest making only a temporary occupation. I should guess that these birds are mainly young ones now eager for sites, as there are indications that most of the wandering adult females are settled earlier.

Altogether, since the end of August, I have seen in my area about half a dozen unmarked birds (of unknown age) which were evidently wandering without territory, but of course this number would depend on the luck and frequency of my reconnaissances. It was interesting to watch one such bird in adult plumage on September 20th being chivied out of two or three territories by the residents.

The quick disappearance of birds 1, 3, 4, 5, 7 marked by me in October to December, 1922 (Vol. XVII., p. 297), could now be easily explained by their being birds of the notable October–November movement which were not true residents.

Now that I know true residents I do not ring a bird till it has been at least a week in a site.

After the breeding season the adult owners of territory do not exhibit themselves in the regular winter and spring manner, and do sentry-go, till the last half of September. Young birds do it earlier and their youth may be disclosed thereby. The more active supervision of territory thus arising late in September is probably due to the more active demand for sites as referred to above, both by females and young. It is remarkable how new birds find out where there is an unclaimed or feebly claimed bit of ground, sometimes quite a small one, and learn at once its exact boundaries.

I have referred to young generally disappearing, but in the case of one brood of mine, what appeared to be two of the young remained on in the territory during the parents' moult and later. The male, 20, had continually to chase them away from his food, but it was only a mild, short chase. He did not seem to mind them much. One of them (42) soon went to new ground. The other (43) remained on and secured by a mild process a part of the old territory and has been its recognized owner ever since.

Acquisition of Sites.

I may here describe the general acquisition of sites in the autumn of 1924. Altogether from last breeding season to December 21st ten new birds, exclusive of my marked females, established themselves in an area which in the breeding season held nine pairs and two unpaired birds. But three of these (42, 46, 51) disappeared again during that period, leaving as a result seven new occupants to that area; or to put it another way, an area which contained twenty adults in the breeding season now holds nineteen birds, made up as follows:

Ten old males (2, 9, 18, 19, 20, 21, 22, 26, 38, 39), two old females (27, 34), four young birds (41, 43, 44, 45) and three other birds, age unknown (47, 53, 55).

I have recently got to know the occupants of a larger area than above, but I do not know the previous history of the additional part well enough to determine which birds are new.

The process of acquisition by the ten new birds plus two old females was as follows:

Six (27 F., 34 F., 41, 43, 47, 51) got their ground by reducing the area of breeding territories which had been left to the sole occupancy of the males. Two (45, 46) by taking parts

of one territory from which both the male and female had disappeared. One (42) by taking unoccupied ground. Two (44, 53) by the displacement or disappearance of two of the former owners (42, 46). One, very recent (55), by taking a very small bit, of doubtful ownership, bordering on three territories.

(G) This proposition rests on the experience given in my previous papers, especially see p. 98 above.

Whilst numbers of females were evidently in motion very early last spring, I have yet to be sure of the sex of the birds which leave me at that time. Such observations in 1925 will be interesting.

(H) A basis for this surmise is the arrival—one in December of each year—of such birds as 55 in 1924, 31 in 1923, 7 in 1922 (see tables).

Song.

(I) Song this summer had ceased with one-half of the males by the end of the first week in June. All except two had ceased by the end of the second week, and these two had not altogether ceased till after the third week in June. (In the Robin as well as in several other species song lasted this year about a fortnight later than usual.)

The latest singer was the latest male to begin moulting.

But the latest singer had the least delay between ceasing song and showing signs of moult, namely nine days. In July this year I heard no song from young or adults except a few notes on one or two occasions from one young bird (41) which had acquired a site. I do not know when old birds recommenced song this August (1924), as I was away part of the month, but by August 22nd several old males were singing, though their moult was still in the stage of the buff frontal band referred to below. It may here be noted that for a certain period (moult) Robins do hold territory without any song. With regard to female song, each of the three marked adult females which took up sites round me this autumn were heard to sing, but the total for the whole autumn was only a few feeble bars; and these were generally made on occasions of hostility. The same applies to another bird which I later found to be a female, while another female born in 1924 has never been heard to sing yet. But of course there was certain to have been more song than I happened to hear.

There is no doubt that Robin's autumn song goes with a high barometer, sunshine, and absence of wind; in unpleasant,

noisy, or raw weather it is most unlikely that any song will be heard. In autumn there is an undoubted habit with Robins of not singing or appearing for one hour or two after mid-day.

Lord Grey of Falloden has sent me a charming and instructive account of certain Robins of his acquaintance which I must only very briefly refer to here, where it applies to my particular observations.

One male Robin, identified by a certain freak feather, and tamed to perch on the hand, has been in the same territory for three years past, only shifting about ten yards in 1924. There was a nest each year. Two other males, in quite different neighbourhoods and identified by being tamed to perch on the hand, held the same territories in the autumn as in the spring 1924. A fourth male similarly identified in spring 1924 has, however, apparently not reappeared in its territory in the autumn.

These males in the three cases observed ceased to show themselves at about mid-July. This being a month later than my Irish birds corroborates what I said on p. 302, Vol. XVII. One reappeared about mid-August, one towards the end of August and one in September.

He describes a furious combat at his very feet due to one bird entering another's territory to take the food. Such a patch of feathers was left that if he had not seen the fray he would have thought a bird had been killed there. He refers to the greater shyness of the females in spring. He found that the females began to be fed, and *expected* to be fed, by the male as nesting approached, but not before; and this continued from April onwards. Though not directly relevant to this paper, I would add his interesting note that one of the tamed males would perch on his hand and fill its beak with meal worms when he was a yard from the nest, but would not go to the nest unless he moved five or six yards from it.

NUMBER MARKED AND AREA.

I have altogether marked fifty-five birds, of which twenty-four are my present occupants, in an area of observation of about twenty-four acres, divided up by hedges, etc., so as to provide about an average of 120 lineal yards to each bird.

The following is a continuation of the table on p. 103 above, for the recently ringed birds. The above table will have to be brought up to date later.

No.	First noticed in occupation.	Date marked.	Notes.
41	17/7/24	24/7/24	Born 1924.
42	-/6/24	1/8/24	Born 1924, not seen since early August, 1924.
43	-/7/24	26/8/24	Born 1924.
44	23/8/24	30/8/24	Probably born 1924.
45	22/6/24	31/8/24	Born 1924.
46	16/9/24	10/10/24	Born 1924, not seen since 15/11/24.
47	17/10/24	31/10/24	New arrival.
48	24/9/24	2/11/24	
49	23/10/24	2/11/24	
50	14/10/24	7/11/24	
51	27/10/24	15/11/24	New arrival, not seen since marking.
52	11/11/24	15/11/24	New arrival.
53	23/11/24	13/12/24	New arrival in place of 46.
54	11/11/24	13/12/24	
55	14/12/24	21/12/24	New arrival.

THE SMALLEST BOOK ON ORNITHOLOGY.

BY

HUGH S. GLADSTONE.

IN June, 1924, I bought for 3s. 6d., from a second-hand book-seller, a book entitled: *Natural History of 48 Birds, with elegant engravings, from drawings by Alfred Mills. London: printed for Darton, Harvey, & Darton, Gracechurch-Street. 1810.* Forty-eight species of birds are described, namely:—

Eagle	Bullfinch	Wild Pigeon	Peewit
Falcon	Goldfinch	Turtle-Dove	Parrot
Vulture	Sky-Lark	Dodo	Kingfisher
Horned Owl	Wagtail	Domestic Cock	Spoonbill
Screech Owl	Robin	Pheasant	Heron
Magpie	Wren	Peacock	Curlew
Nutcracker	Tit-mouse or	Guinea-fowl	Snipe
Jay	Tom-Tit	Grouse [sic]	Coot
Blackbird	Chimney	Partridge	Great Crested
Cuckoo	Swallow	Quail	Grebe
Woodpecker	MartinWindow-	Corn-Crake	Avocet
Hoppoe [sic]	Swallow	Ostrich	Swan
Humming Bird	Night-Jar	Bustard	Pelican

Two pages of text are allotted to each species, making ninety-six pages in all, and a plate of each bird (with the exception of the Eagle) is given, making a total of forty-seven plates.

The book when I bought it was in such a dilapidated condition that it had to go at once to the book-binder, and as returned to me (admittedly, and to my great regret, cut down) it now measures 2.25 by 2 inches.

Professor Alfred Newton in a footnote to his introduction to *A Dictionary of Birds: 1893-6: p. 24*, draws attention to "a *Histoire Naturelle en Miniature de de* [sic] *48 Oiseaux* (96 pp. Paris: 1816)," and he states: "The only copy I have seen appears to be in the original calf binding, and measures 2.6 by 2.15 inches. I am indebted for the loan of it to Mr. Robert Service."

In 1875 this book was bought for 6d. at a London bookstall by Mr. Joseph B. Service, Maxwelltown, and was given by him to his brother Robert who, shortly before his death in 1911, wished to present it to me. In those days my ornithological library seemed hardly worthy of such an interesting contribution and I suggested that it should be given to Mr. J. A. Harvie-Brown. My suggestion was duly complied

with and at the death of Mr. Harvie-Brown the book passed, with the rest of his library, to the Royal Scottish Museum, Edinburgh, where I recently had the pleasure of again handling it.

The title-page is as follows: *Histoire/ Naturelle/ en minia-
ture/ de/ De 48 Oiseaux/ avec des descriptions./ Paris/
Guyot et de Pelafol/ rue des Grands-Augustins, n. 21/
MDCCCXVI.*

On comparing the French and English books it came as a surprise to find that the French publication was simply a copy of the English book which had been published six years previously. The same forty-eight species of birds are described, each being allotted two pages of text, and the descriptions are very similar, and in some cases mere translations from the English. As regards the forty-seven plates (for there is not one of the Eagle) it is quite obvious that these have all been copied from the English book, but all are reversed.

I have already stated that my copy of the English book is cut down, but from its present appearance I am of the opinion that it can never have been larger than the French publication. In any case it was published six years prior to the French work, which, as has been shown, is simply a copy; I therefore think that the booklet of 1810 may justly claim to be the smallest book on ornithology.

THE "BRITISH BIRDS" MARKING SCHEME.*

PROGRESS FOR 1924.

BY

H. F. WITHERBY.

THE number of birds ringed in 1924 reached a surprising total, far exceeding that of any year since the scheme was started. For this pleasing result we are indebted to many ringers who have greatly increased their previous totals as well as to a number of new ringers who have made most excellent beginnings. The following are the totals:—

NUMBER OF BIRDS RINGED.

	In 1924	..	..	18,189	
In 1909	..	2,171	In 1916	..	7,107
„ 1910	..	7,910	„ 1917	..	6,926
„ 1911	..	10,416	„ 1918	..	5,937
„ 1912	..	11,483	„ 1919	..	3,578
„ 1913	..	14,843	„ 1920	..	5,276
„ 1914	..	13,024	„ 1921	..	8,997
„ 1915	..	7,767	„ 1922	..	9,289
	In 1923	..	..	12,866	
	Grand Total	..	..	145,779	

Dr. Moon heads the list this year with well over two thousand, while Mr. Mayall is a good second with just under the two thousand. Dr. Moon's total is made up of forty-five species, chiefly Passeres, the largest numbers ringed being Song-Thrush (508), Blackbird (350), Chaffinch (169), Wren (160), Robin (144), and Willow-Warbler (139). Mr. Mayall's list includes forty species, also mainly Passeres, the largest numbers being Song-Thrush (403), Blackbird (255), Martin (217), Swallow (167), Chaffinch (144), Robin (105), while Wood-Warbler (46) and Marsh-Warbler (14) may be specially mentioned. Capt. Boyd, with over sixteen hundred—a great

* For previous Reports see Vol. III., pp. 179-182, for 1909; Vol. IV., pp. 204-207, for 1910; Vol. V., pp. 158-162, for 1911; Vol. VI., pp. 177-183, for 1912; Vol. VII., pp. 190-195, for 1913; Vol. VIII., pp. 161-168, for 1914; Vol. IX., pp. 222-229, for 1915; Vol. X., pp. 150-156, for 1916; Vol. XI., pp. 272-276, for 1917; Vol. XIII., pp. 96-100, for 1918; Vol. XIII., pp. 237-240, for 1919; Vol. XIV., pp. 203-207, for 1920; Vol. XV., pp. 232-238, for 1921; Vol. XVI., pp. 277-281, for 1922; Vol. XVII., pp. 231-235, for 1923.

increase on last year—comes third, and his list contains fifty-five species, which is the largest number of any ringer. Thirty are Passeres and twenty-five of other orders, the largest number being Lesser Black-backed Gull (278), Common Tern (241), Mallard (192), Swallow (116) and Song-Thrush (102). Mr. Macdonald's total of over eleven hundred is also a great increase over last year's, and is chiefly made up of Guillemot (551) and Gannet (425), while Kestrel (12) and Golden Eagle (1) may be mentioned. Mr. and Mrs. Taylor have again ringed over a thousand, comprising thirty-five species, twenty-eight of which are Passeres, and the largest numbers being Blackbird (274), Linnet (184), Song-Thrush (170). Dr. Joy has once more ringed a large number, and his list contains forty-seven species, the chief item being Martin (261), while Swift (50) should be noted. Lord Scone has been by far the most successful new ringer, his total of over seven hundred consisting chiefly of Passeres, Song-Thrush (316) being the largest number, and Wood-Pigeon (22) may be mentioned as a bird which does not generally receive enough attention. Amongst other new ringers who have done remarkably well are Mr. Richmond Paton (230), Mr. W. Duncan (204) and Miss Mayne (102).

Regarding the species ringed, I am glad to see large increases in such birds as Mallard, Teal, Gannet, Wood-Pigeon, Curlew and Guillemot, while the record number of Lapwing ringed is interesting in view of its recorded scarcity in some parts. The large number of Swallows and Martins ringed is also noteworthy.

The number of 1924 birds recovered so far appears to be below the average, and it seems possible that this may be due to an unusually heavy mortality of very young due to the wet season, though it must be clearly understood that this is a supposition, in support of which I have no really definite evidence. If the recoveries have been few, many of them have been interesting. Amongst those already published (*vide antea*, pp. 186-191) I may draw attention to the Wood-Warbler ringed as a nestling in Berkshire by Mr. Mayall and recovered in September in southern Italy. We have had very few records of birds ringed in England as nestlings recovered so far to the east on migration, and this is also the first ringed Wood-Warbler recovered outside this country. Another interesting record (not yet published) is that of a Chiffchaff, ringed by Mr. Mayall as a nestling in Buckinghamshire in 1923, which was reported from Evora, Portugal, in October, 1924. Some interesting recoveries of Teal ringed

by Sir Richard Graham on the Solway have also been reported. These birds were hand-reared in 1922, and their wings were cut. The wing-feathers were pulled in March, 1923, and the birds ringed and released. In a few weeks the wing-feathers would grow and the birds would be able to fly. Three were reported in 1924, one near Manchester in September, one in Denmark in October, and the other in northern Sweden in September. The two last mentioned seem likely to be cases of what Dr. Landsborough Thomson has styled "abmigration" (see Vol. XVI., pp. 275-6), and are very interesting when taken in conjunction with the other records mentioned in the article referred to. The most remarkable record received in 1924 is, however, of a Kittiwake which was ringed as a nestling by Mr. A. C. Greg at the Farne Islands in 1923, and was reported from Newfoundland in August, 1924. This is the first bird ringed in the British Islands which has been recorded as having crossed the Atlantic. Full details of these and other recoveries will be published later.

In this year's report it will be seen that I have added some species under the heading "some percentages of recoveries." It is plain why we get as a rule a larger percentage of large birds than small, and of birds which are killed for food or because they are destructive or supposed to be so, but it is puzzling to find so much difference in certain species such as, for instance, Guillemot and Puffin.

NUMBER OF BIRDS "RINGED."

DR. H. J. MOON (2193), Messrs. A. Mayall (1990), A. W. Boyd (1643), D. Macdonald (1106), Mr. W. P. G. and Mrs. L. E. Taylor (1085), Dr. N. H. Joy (811), The Lord Scone (764), Messrs. J. Bartholomew (632), A. H. R. Wilson (624), R. H. Brown (575), H. W. Robinson (529), Mr. and Mrs. R. O. Blyth (478), Mr. H. G. Watson (449), Misses F. K. Staunton and C. Wingfield (342), Messrs. T. Kerr (314), R. M. Garnett (303), G. W. Thompson (275), P. E. A. Morshead (253), A. S. Corbet (238), J. F. Thomas (236), E. Richmond Paton (230), The Lon. Nat. Hist. Soc. (218), Messrs. J. R. B. Masefield (205), W. Duncan (204), P. K. Chance (165), Col. P. C. Macfarlane (138), Mr. C. F. Archibald (130), Dr. J. N. D. and Mr. T. L. Smith (122), Mrs. T. E. Hodgkin (117), Sir Richard Graham, Bt. (116), Mr. H. S. Gladstone (110), Miss I. Mayne (102), Mrs. L. Marshall (101), Major W. M. Congreve (97), The Rev. E. Peake (78), Misses E. L. Turner (71), J. M. Ferrier (70), Messrs. T. Greaves and F. Dipple (70), Bristol Naturalists' Society (68), Mrs. Leyborne Popham and Miss L. W. Streatfield (65), Messrs. W. G. Bramley (61), B. J. Ringrose (58), F. H. Lancum (54), F. J. Mitchell (47), J. F. Madden (45), Major M. Portal (45), Messrs. W. Davidson (39), T. L. S. Dooly (38), R. W. Corbett (36), Miss B. A. Carter (34), Messrs. J. S. Elliott (33), H. Sagar (32), Miss C. M. Acland (32), Mr. P. A. Burt (24), Dr. H. G. Langdale Smith (23), Miss V. E. Buxton (22), and others who have ringed under 20 each.

NUMBERS OF EACH SPECIES "RINGED."

	'09-'17	'18	'19	'20	'21	'22	'23	'24	Total
Crow, Carrion ..	22	No record	kept	16	11	18	59	126	
Rook ..	217	23	3	8	17	6	94	24	392
Jackdaw ..	163	9	4	7	29	20	18	36	286
Jay ..	30	6	—	5	2	7	6	20	76
Starling ..	6648	219	151	169	411	454	736	738	9526
Greenfinch ..	2326	260	206	187	380	386	352	484	4581
Goldfinch ..	10	No record	kept	20	12	10	19	71	
Twite ..	42	—	—	3	1	—	1	16	63
Redpoll, Lesser ..	132	4	—	3	5	17	12	1	174
Linnet ..	1082	173	46	122	272	377	575	435	3082
Bullfinch ..	154	21	20	40	52	23	63	62	435
Chaffinch ..	2377	262	220	367	521	618	635	764	5764
Sparrow, House ..	464	—	—	2	1	1	2	15	485
Sparrow, Tree ..	184	4	17	20	48	40	32	70	415
Bunting, Yellow ..	374	62	29	41	100	101	144	143	994
Bunting, Reed ..	286	54	20	39	59	54	39	27	578
Lark, Sky ..	1577	150	51	41	63	64	61	114	2121
Pipit, Tree ..	194	5	15	31	34	42	57	72	450
Pipit, Meadow ..	1168	85	12	22	134	62	61	114	1658
Wagtail, Yellow ..	92	9	5	5	26	19	20	14	190
Wagtail, Grey ..	105	8	1	—	11	25	37	34	221
Wagtail, Pied ..	684	17	20	46	124	112	136	243	1382
Creepers, Tree ..	12	No record	kept	24	13	11	4	64	
Tit, Great ..	749	16	8	26	31	18	23	20	891
Tit, Blue ..	658	5	—	6	12	32	11	33	757
Tit, Coal ..	88	—	—	15	3	—	1	2	109
Tit, Marsh ..	52	—	—	—	—	4	—	4	60
Tit, Long-tailed ..	41	—	—	—	—	—	5	1	47
Wren, G.-crested ..	40	—	1	1	1	—	7	22	72
Shrike, R.-backed ..	117	16	17	22	29	11	19	33	264
Flycatcher, S. ..	630	100	65	114	157	72	126	208	1472
Flycatcher, Pied ..	6	No record	kept	43	13	1	14	77	
Chiffchaff ..	64	6	—	19	68	25	22	50	254
Warbler, Willow ..	1610	154	108	206	284	274	402	436	3474
Warbler, Wood ..	77	18	3	34	71	59	80	86	428
Warbler, Reed ..	160	54	38	31	39	21	23	8	374
Warbler, Sedge ..	170	72	32	30	80	50	57	45	536
Warbler, Garden ..	111	1	14	55	55	42	56	100	434
Blackcap ..	105	9	—	21	32	37	26	25	255
Whitethroat ..	332	40	85	130	179	133	177	138	1214
Whitethroat, L. ..	117	11	13	28	23	19	33	18	262
Fieldfare ..	85	—	—	—	—	—	—	—	85
Thrush, Mistle ..	574	33	21	33	77	103	171	139	1151
Thrush, Song ..	8454	789	475	621	1042	1052	1702	2650	16795
Redwing ..	42	—	—	—	3	—	—	1	46
Ouzel, Ring ..	80	3	1	—	3	5	26	7	125
Blackbird ..	4761	446	386	469	918	920	1334	1985	11210
Wheatear ..	175	17	—	11	75	155	83	97	613
Whinchat ..	320	65	17	55	17	30	69	49	631
Stonechat ..	136	—	—	—	5	25	56	27	249
Redstart ..	196	13	15	12	135	76	102	58	607
Nightingale ..	41	5	5	19	19	20	19	18	146

	'09-'17	'18	'19	'20	'21	'22	'23	'24	Tota
Redbreast	.. 2464	204	162	299	494	507	865	753	5748
Sparrow, Hedge	.. 1677	98	110	185	246	221	409	403	3409
Wren ..	.. 693	34	11	76	265	133	321	331	1864
Dipper ..	.. 128	11	5	8	18	8	19	55	252
Swallow ..	.. 6064	714	512	307	382	821	889	1055	10744
Martin ..	.. 1560	137	87	87	144	245	296	900	3456
Martin, Sand	.. 685	29	32	52	37	18	159	234	1246
Swift ..	.. 6	No record	kept		27	72	37	87	229
Nightjar ..	.. 45	2	2	6	7	5	10	7	84
Wryneck ..	.. 166	29	—	17	8	8	2	20	250
Cuckoo ..	.. 96	14	7	7	20	16	22	20	202
Owl, Long-eared	.. —	30	—	2	10	12	7	—	61
Owl, Barn..	.. 75	—	1	5	14	2	13	5	115
Owl, Tawny	.. 85	14	18	8	15	14	14	18	186
Merlin ..	.. 16	No record	kept		1	6	4	9	36
Kestrel ..	.. 45	7	3	4	12	3	20	28	122
Buzzard ..	.. 2	No record	kept		11	3	2	8	26
Hawk, Sparrow	.. 60	2	—	5	4	9	19	21	120
Heron, Common	.. 110	1	—	—	—	6	14	21	152
Sheld-Duck	.. 49	—	1	21	1	—	4	—	76
Mallard ..	.. 640	4	—	1	41	58	180	281	1205
Teal ..	.. 96	—	33	20	—	1	—	135	285
Wigeon ..	.. 76	1	2	23	1	15	—	3	121
Duck, Tufted	.. 65	—	—	—	—	4	1	—	70
Cormorant	.. 470	21	72	—	—	—	—	8	571
Shag ..	.. 156	—	10	—	—	—	46	20	232
Gannet ..	.. 198	—	—	—	—	26	119	425	768
Shearwater, Manx	69	—	—	3	—	—	9	13	94
Wood-Pigeon	.. 164	20	9	19	33	26	61	181	513
Dove, Stock	.. 45	1	5	6	26	7	15	19	124
Dove, Turtle	.. 61	8	7	5	9	12	13	19	134
Oystercatcher	.. 91	3	6	4	5	7	20	70	206
Plover, Ringed	.. 128	14	1	19	39	19	47	75	342
Plover, Golden	.. 43	6	—	—	4	1	2	5	61
Lapwing ..	.. 3756	154	123	125	220	345	358	597	5678
Sandpiper, C.	.. 167	25	16	13	10	24	37	44	336
Redshank ..	.. 270	25	3	13	25	26	32	39	433
Curlew, Common	.. 193	17	4	14	36	67	58	110	499
Snipe, Common	.. 192	19	3	6	19	18	8	50	315
Woodcock..	.. 345	3	—	17	8	31	28	57	489
Tern, Sandwich	.. 678	—	53	31	30	77	153	92	1114
Tern, Common	.. 3093	761	—	144	706	2	44	425	5175
Tern, Arctic	.. 85	—	20	25	24	2	1	9	166
Tern, Little	.. 174	1	—	9	—	9	1	29	223
Gull, B.-headed	11946	4	11	—	5	—	—	3	11969
Gull, Common	.. 514	—	—	—	—	26	36	59	635
Gull, Herring	.. 511	—	1	—	6	9	20	43	590
Gull, L. Blk.-bkd	.. 2537	84	77	471	197	455	120	565	4506
Gull, G. Blk.-bkd	.. 78	—	—	—	—	2	3	33	116
Kittiwake	.. 33	50	1	—	—	43	86	15	228
Razorbill ..	.. 60	4	—	5	—	18	42	95	224
Guillemot ..	.. 23	No record	kept		—	106	255	563	947
Puffin ..	.. 901	2	2	—	—	8	45	19	977
Moor-Hen ..	.. 267	24	7	20	12	33	25	43	431

SOME PERCENTAGES OF RECOVERIES.

Species.	Number Ringed 1909-23.	Number of these Recovered to date.	Percentages of Recoveries.
Rook ...	368	14	3.8
Starling ...	8,788	479	5.4
Greenfinch ...	4,097	35	0.8
Linnet ...	2,647	21	0.7
Chaffinch ...	5,000	62	1.2
Yellow Bunting ...	851	27	3.1
Reed-Bunting ...	551	2	0.3
Sky-Lark ...	2,007	17	0.8
Meadow-Pipit ...	1,554	21	1.3
Tree-Pipit ...	378	2	0.5
Pied Wagtail ...	1,139	27	2.3
Spotted Flycatcher ...	1,264	3	0.2
Willow-Warbler ...	3,038	23	0.7
Whitethroat ...	1,076	5	0.4
Mistle-Thrush ...	1,012	21	2.0
Song-Thrush ...	14,135	167	1.1
Blackbird ...	9,234	223	2.4
Wheatear ...	516	4	0.7
Whinchat ...	562	5	0.8
Redstart ...	549	2	0.3
Redbreast ...	4,995	173	3.4
Wren ...	1,553	2	0.1
Swallow ...	8,689	70	0.8
Martin ...	2,556	15	0.5
Sand-Martin ...	1,012	4	0.3
Swift ...	142	5	3.5
Cuckoo ...	182	6	3.2
Tawny Owl ...	168	11	6.5
Kestrel ...	94	8	8.5
Sparrow-Hawk ...	99	17	17.1
Heron ...	131	19	14.5
Mallard ...	924	165	17.7
Teal ...	150	20	13.3
Shag ...	212	25	11.8
Cormorant ...	563	99	17.5
Gannet ...	343	15	4.3
Wood-Pigeon ...	332	17	5.1
Ringed Plover ...	267	4	1.4
Lapwing ...	5,081	136	2.6
Common Sandpiper ...	292	0	0.0
Redshank ...	394	21	5.3
Curlew ...	389	15	3.8
Snipe ...	265	25	9.4
Woodcock ...	432	49	11.3
Sandwich Tern ...	1,022	11	1.0
Common Tern ...	4,750	95	2
Black-headed Gull ...	11,966	526	4.3
Common Gull ...	576	16	2.7
Herring Gull ...	547	17	3.1
Lesser Black-backed Gull ...	3,941	158	4.0
Guillemot ...	384	8	2.0
Puffin ...	958	1	0.1

NOTES

TIME-PERIOD FOR NEST AND EGG REPLACEMENT.

WITH reference to Mr. Symes' note (*antea*, p. 244), two clutches of eggs of the Carrion-Crow (*C. c. corone*) taken in central Somerset, of an unusual blue type, were laid as follows:—
Four eggs taken April 19th, 1924; five eggs May 5th, 1924.
Interval sixteen days.

C. J. PRING.

EARLY NESTING OF HOUSE-SPARROW IN SUFFOLK.

FOUR newly-hatched chicks of the House-Sparrow (*Passer. d. domesticus*) fell from a nest in the thatched roof of a house in Walberswick, Suffolk, on February 4th, 1925. The occupants of the house had been watching the birds building for some time. I believe nests and young of this species have been reported in most months of the year. Is there a record for January?

CHARLES E. ALFORD.

[In the *Birds of Yorkshire*, I., p. 177, it is stated that eggs were found on 27th January, 1874, and young were recorded on 21st February, 1846, near Huddersfield.—F.C.R.J.]

LESSER WHITETHROAT IN WALES.

DURING a visit to the Lleyn promontory of Carnarvonshire in the first week of June, 1924, Dr. F. B. Smith, of Harrogate, observed a bird in some scrub near the edge of a cliff carrying food, presumably to its young. At first he took it for a Common Whitethroat (*Sylvia c. communis*) which was frequently to be seen. It was silent and difficult to approach on account of the nature of the ground, and hard to see even with binoculars. He saw it on two days at the same spot in brambles at the top of a cliff, and felt certain it had a nest just over the brow. It was smaller than the Common Whitethroat, the white front was more pronounced, and the head and back more grey. All these details seem to indicate that it was a Lesser Whitethroat (*Sylvia c. curruca*), though up to the present this species had not been recorded in Lleyn. There is, however, an accumulating body of evidence to show that the Lesser Whitethroat is steadily increasing and extending its range westwards in Wales. Along the north coast it is now a regular summer visitor in fair numbers, while Professor Salter tells me that in the Aberystwyth district also, where it was formerly only of casual occurrence, it has become a regular visitor during the last few years. On June 8th three were singing.

H. E. FORREST.

BLACK REDSTARTS IN N. WALES.

THE Rev. E. Lorimer Thomas tells me he saw a male Black Redstart (*Phœnicurus ochrurus gibraltariensis*) on a stony hill near Abergele on May 15th, 1924; and a female near Criccieth on October 23rd, 1924.

With regard to the latter he writes:—"I watched it for half-an-hour, and noted uniform dark brown back, underneath uniform lighter brown. The bird flew, rarely, down to a palisade in the garden of the house, and once thence on to the gravel path. Mostly, however, it caught flies on the roof, returning to four favourite spots thereon. The click of the beak when a fly was caught was distinctly audible. Its ways were just those of a Spotted Flycatcher. The next day it left the roof after we had watched it a few minutes, and went to a wall near, whence it frequently dropped to a grass field. It stayed on the grass a good deal longer than a Stonechat or Robin would have done. The Black Redstart was silent the whole time."

H. E. FORREST.

MORE LITTLE OWLS IN NORTH LANCASHIRE.

IN my last note on the Little Owl (*Athene noctua vidalii*) in Lancashire I was able to add three more records to the only two authentic ones previously recorded. I now have the doubtful pleasure of recording three fresh records comprising four specimens. Mr. H. P. Hornby informs me that he has recently (January) examined two freshly shot specimens, the one killed at Winmarleigh and the other at Wharles, and that the fellow to the latter is now confined in a bird cage, having been temporarily knocked out by a stone from a catapult. The other specimen is in the collection of Dr. Fred Hogarth of Morecambe and was shot in the autumn of 1922 at Wennington. In priority this bird becomes No. 4.

H. W. ROBINSON.

HEN-HARRIER IN SHROPSHIRE.

IN July, 1924, a Hen-Harrier (*Circus cyaneus*) in immature plumage was seen in south Shropshire not far from the place where a brood was reared in 1923 (*Brit. Birds*, XVII., 309).

H. E. FORREST.

COMMON SCOTER INLAND IN SOMERSET.

ON April 20th, 1924, I watched an adult drake Common Scoter (*Oidemia n. nigra*) on one of the Barrow Gurney reservoirs, north Somerset. In view of some recent notes on oil-clogged Common Scoters inland (*Brit. Birds*, Vol. XVII.,

pp. 281 and 316) it is perhaps worth mentioning that as far as could be seen this bird was in excellent plumage and condition, and it had all the appearance of being a genuine inland loiterer on migration, unhampered by oil or any other disability.

B. W. TUCKER.

SMEW NEAR LONDON.

I HAVE previously recorded in *British Birds* the occurrence of the Smew (*Mergus albellus*) in the London district (on each occasion single brown-headed birds), viz. :—Walthamstow Reservoirs, March 18th, 1922 (Vol. XVI., p. 26), and February 16th, 1924 (Vol. XVII., p. 310), Staines Reservoir, December 16th, 1923 (Vol. XVII., p. 209). On March 1st, 1924, I saw two adult males and ten brown-headed birds on Walthamstow Reservoirs, and one brown-headed bird was seen at the same place on March 8th. The latter was the last record for that winter. For the present winter the first record I have is one brown-headed bird at Staines Reservoir on December 26th, 1924. One adult male and three brown-headed birds were seen at Walthamstow Reservoirs on January 3rd and 25th, 1925.

These records, taken in conjunction with those of Mr. A. Holte Macpherson (*antea*, pp. 243-4), suggest the probability of the formation of a regular annual movement by this species to the London district.

WILLIAM E. GLEGG.

BLACK-NECKED GREBE IN SOMERSET.

ON September 19th, 20th, 29th, and October 4th, 1924, I had a bird under observation on the middle reservoir at Barrow Gurney, which I am satisfied was a Black-necked Grebe (*Podiceps nigricollis*) and not a Slavonian. I watched it on September 19th with field-glasses and on the subsequent occasions with a telescope. Except on the 20th, when the bird was quite close inshore but this advantage was neutralized by wind and driving rain, it was never within a hundred yards of me. The bill appeared slender and gave a strong impression—falling just short of absolute certainty—of being slightly uptilted. It may be doubted whether at this range a more definite conclusion than this could be expected. It could be clearly seen, however, that the black extended well below the eye and over the ear-coverts, the distribution of black and white on the head being precisely as shown in the figure in the *Practical Handbook*, and different from that of the Slavonian, and also agreeing closely with skins which I have subsequently examined at the British Museum. When the bird was facing away from me with the neck erect it

showed a broad black band down the back, not constricted at the nape, as it usually is in the Slavonian, by the close approximation of the white of the two sides of the head. These characters are sufficient, I think, to warrant recording the bird definitely as a Black-neck. Only two other occurrences in the county are on record. B. W. TUCKER.

COMMON SANDPIPER AND WHITE WAGTAIL IN JANUARY IN LANCASHIRE.

ON January 19th, 1925, I was taken to see a Common Sandpiper (*Tringa hypoleucos*) close to Lancaster. It was extremely lively and most evidently no crippled bird. I saw one at Lytham on March 21st, 1909, and it has been notified as late as November, but I think this is the only record between December and February for Lancashire. Whilst examining it through a telescope to see what it was feeding on, I was surprised to see another summer bird trip across the lens in the form of a White Wagtail (*Motacilla a. alba*). Mr. Charles Hodgson, who took me to confirm his identification of the Common Sandpiper, and who also saw the White Wagtail, states that the former has been there all this winter and that one day before Christmas there were two of them.

H. W. ROBINSON.

[Mr. J. F. Peters recorded a Common Sandpiper from Lake Windermere on December 30th, 1923, to January 1st, 1924 (Vol. XVII, p. 248).—EDS.]

WHIMBREL ABOUT TO LAY IN JANUARY.

ALTHOUGH Whimbrel (*Numenius phaeopus*) in winter are uncommon, their occurrence is hardly worth notifying. One shot at the mouth of the Lune below Lancaster on January 9th, 1925, which I handled in the flesh, seems, however, to deserve some remark, for it was a female containing eggs so well developed that an egg expert gave five days as the period for the deposition of the largest egg. As the Whimbrel does not normally commence laying before the third week in May, it seems rather extraordinary for a bird to be carrying such well-developed eggs so early.

H. W. ROBINSON.

EARLY BREEDING OF MOOR-HEN IN KENT.

ON February 14th, 1925, the Park Superintendent at Dartford called my attention to a pair of Moor-Hens (*Gallinula chloropus*) which were feeding at the edge of the park lake, accompanied by two young birds. The Superintendent states that he and his men first noticed the young about five weeks ago, when they were very tiny and apparently only a few days old. This

means that these birds were hatched about the first week in January, an extraordinarily early date for this species. I would add that the river Darenth runs through this lake, which is quite open, and that the birds are not protected in any way.

F. HOWARD LANCOM.

[For other notes on early breeding of this species see Vol. VI., p. 375, Vol. XII., pp. 21, 48 and 143.—EDS.]

LATE NESTING OF HOUSE-MARTIN IN WORCESTERSHIRE.—Mr. H. G. Alexander informs us that a pair of House-Martins (*Delichon u. urbica*) were still feeding young in the nest at Rednal, North Worcestershire, 700 feet above sea-level, on October 18th, 1924; one young bird had just flown, but two more were still in the nest. Ten days later all had gone.

OBITUARY.

THE LATE H. N. PASHLEY.

THE well known old East-coast naturalist and bird-stuffer, Harry N. Pashley, passed away in Cley village on the evening of January 30th, 1925.

He was a remarkable man in many ways, and his knowledge of, and interest in, Natural History, especially Ornithology, made him well known to a wide circle beside those lovers of East Anglia who, of course, knew him best. He was a real old-time naturalist, self-educated and fairly well read, and possessing a freshness and vigour of mind, and a delightful simplicity of character, that endeared him to all who had the pleasure of knowing him.

Pashley was born at Holt in Norfolk on October 6th, 1843. He married in the year 1867 and subsequently lived in Norwich for some years, finally settling down at Cley in or about 1886. In 1890 he won from 150 competitors the late Lord Lilford's prize for the best mounted specimen, the then Editor of the *Field* acting as judge.

Pashley was in close touch with Norfolk bird-lovers, and during the last forty years most of the rare birds obtained in north Norfolk passed through his hands. He mounted many of the birds in the celebrated Connop Collection, and several unique rarities, such as the Pallas's Warbler, were brought to him in the flesh.

Thomas Southwell, Professor Newton, Howard Saunders, Colonel Feilden, John Henry Gurney, and other distinguished ornithologists used to visit Pashley regularly, and were regarded not only as visitors but as friends.

He could tell many a good story of bygone days, of hard winters, rare birds, and quaint characters, for his memory was

retentive to the end of his long life, and he almost knew by heart some of his well-loved books, such as Bates's *Travels on the Amazon*.

I am glad to hear that it is proposed to publish Pashley's



notes, which, extending over many years, afford a valuable contribution to the ornithology of the county.

The writer of these lines also believes that many readers of *British Birds* will value the characteristic portrait here reproduced, of one whom he will always regard as one of the most original and interesting men he ever met.

CLIFFORD D. BORRER.



LETTERS

STARLINGS IMITATING WILLOW-WARBLER.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. G. W. Thompson's letter on this subject (*antea*, p. 224), I suggest that the Starling was not imitating the Willow-Warbler but the Green Woodpecker. On the 1st of February, 1925, at Haywards Heath, I heard what I thought was a Green Woodpecker calling in an undertone, as I have frequently heard this species do at the nest, but the only bird I could see was a Starling singing on a cottage roof. As I looked he repeated the call in another key, and after an interval of gurgling, spluttering, squeaking and clicking, he flew a few yards to a branch and there repeated the call twice. I have since heard another Starling uttering a similar series of notes.

I do not suggest that it is impossible for the Starling to imitate the Willow-Warbler in December, because everyone knows that he frequently imitates the Blackbird, though he may not have heard the song for six months. But I think that a Starling's mimicry of the Green Woodpecker's call, which it may hear every day, might easily be mistaken for an attempt to imitate the Willow-Warbler.

CHARLES S. BAYNE.

CONCERNING THE INCUBATION OF GREENSHANK AND DESCRIPTION OF THE NESTLING CHOUGH.

To the Editors of BRITISH BIRDS.

SIRS,—*Apropos* a remark in your review of Messrs. Gilbert's and Brook's *Secrets of Bird Life* (*Brit. B.*, XVIII., p. 247) anent the incubation of the Greenshank (*Tringa nebularia*), may I observe that both sexes are apt to sit? I made this very clear in "Concerning the Greenshank" (*Brit. B.*, XVI., p. 208)—thus: "and I know for a fact that at any rate with some pairs . . ., incubation is shared by both sexes. I have watched the two exchange duties."

As to the nestling Chough (*Pyrrhocorax pyrrhocorax*), it is stated (*A Prac. Handbook*, I., p. 32) that it has not been examined. But five years before the first part of that work was published I described it in *Field Studies of Some Rarer British Birds* (pp. 86-7).

JOHN WALPOLE-BOND.

[In the case of the Greenshank Mr. S. P. Gordon has photographed the change of sexes at the nest, showing the male pushing the female off the eggs. The words "not examined" in the *Practical Handbook* mean not examined by the authors. In the book referred to, Mr. Walpole-Bond gives a full description of the colouring of the mouth and other soft parts of the nestling Chough, while nestling down was absent, and this certainly might have been quoted in the *Handbook*.—EDS.]



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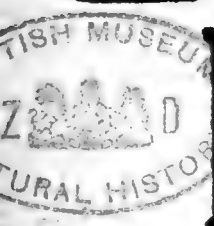
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FIELD-NOTES FROM GLAMORGANSHIRE. (II.)

BY

GEOFFREY C. S. INGRAM, M.B.O.U., AND H. MORREY
SALMON, M.C.

SINCE the publication of our first series of notes (Vol. XVII., p. 94) the following observations have been made:—

JAY (*Garrulus glandarius*, subsp. ?).—A compact flock of thirty was seen near Llanishen on October 7th, 1923, flying at an altitude of about 300 feet and heading due west. For the next two hours there followed stragglers in twos and threes to the number of twenty-two, all proceeding in the same direction. Altogether fifty-two birds were counted, and there must have been many others we did not see. It would appear probable that they were immigrants of the continental race.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—A female was identified at Hensol Park on April 27th, 1924. Although this species breeds annually in the neighbouring county of Brecknockshire, there is apparently no record of its having done so in Glamorganshire, and it is only very rarely seen as a passage migrant.

BLACKCAP (*Sylvia a. atricapilla*).—On page 368, Vol. I., of *A Practical Handbook* the incubation period of this species is given as "14 days; about 15 days (Howard)," while in the "Additions and Corrections" published in Vol. II., Part 2, page 895, there is a note: "Period in some cases only 10-11 days: further observations needed." In our "Field-notes on the Blackcap," published in *British Birds*, Vol. XV., page 78, a table is given of incubation periods, etc., and to this the following can be added regarding a nest kept under observation in the year 1922. Male first seen, April 21st; nest being built, May 2nd; first egg laid, May 13th; number in clutch, 4; date hatched, May 28th; incubation period, 11 days; young leave nest, June 8th; fledgling period, 13 days. Remarks: Two eggs only hatched; other two infertile.*

*Howard gives	Ingram and Salmon
Incub. period about 15 days	Incub. ... 11 days
Fledging period about 9 days	Fledging ... 13 days
Total ...	24 days
... 24 days	24 days

It will be noticed that the totals agree, and the discrepancy probably arises from the exact date of hatching not having been ascertained and the parent brooding newly-hatched young being mistaken for an incubating bird.—EDS.

There are two other interesting notes in connection with this nest, which was in the small thicket referred to in the article, the first being that it was the singing of the male that led to its discovery, for, attracted by this, we found him sitting in a nearly completed nest, singing loudly as he shaped it.

The other note refers to the boldness of this bird while the young were only a couple of days old. On May 30th we tried to photograph him, and fixed up the camera while he was brooding and then began to tie back some bramble stems that passed over the nest. We moved leaves that were within an inch of his head, but he only turned on his side in the nest, scolding us with a peculiar hissing note, and pecking at our hands. Later he crept off, an inch or two from the nest, and sat huddled up uttering a most mournful and long-drawn-out note, eventually creeping back on to the young.

PEREGRINE FALCON (*Falco p. peregrinus*).—On November 11th, 1923, at Kenfig Pool, one of these fine birds was seen sitting on the top of a low sandhill near the edge of the pool. A second was perched on a bush growing on a high dune some 300 yards away. They were evidently a pair, as later on the bird on the sandhill flew over and playfully stooped at the bird on the bush, and eventually both flew off together. Near the foot of the sandhill we found the headless remains of an adult male Pochard (*Nyroca f. ferina*) very nearly clean picked, and on the other side of the pool the body of a male Teal (*Anas c. crecca*), also headless, but only partially eaten.

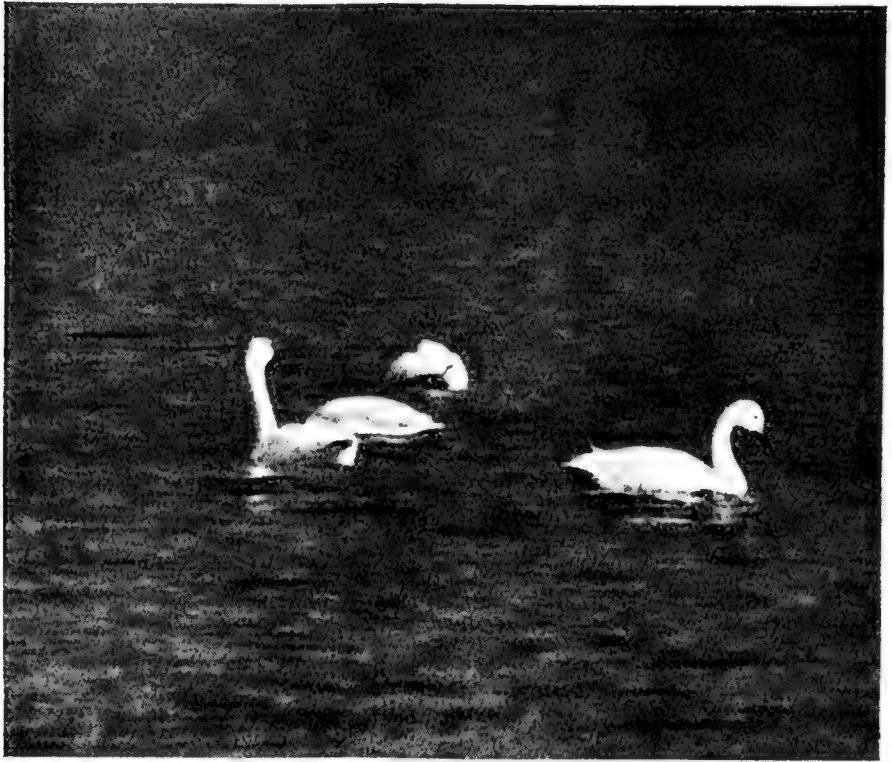
MERLIN (*Falco columbarius æsalon*).—Visiting Kenfig Pool on November 25th, 1923, our attention was attracted by the shrill "Keck, keck" of a Merlin. This cry was accompanied by the gruff bark of an angry Raven (*Corvus c. corax*) which was being relentlessly harried by the little Hawk, and was finding it an exceedingly difficult task to avoid its nimble assailant. Eventually the Raven dived into a bush and remained there until the Merlin departed.

During the past season (1924) we have examined two Merlins' nests in the county, which each contained clutches of five eggs, and, in one case, we know that the full five hatched, and that all the young were successfully reared. We also heard of a third nest which was robbed.

BEWICK'S SWAN (*Cygnus b. bewickii*).—Seven were seen on Kenfig Pool on November 11th, 1923. There was a family party of five—two adults and three juveniles in grey plumage—and two other adults. While watching them we were struck by the fact that before taking flight they called to

each other with a peculiar grunting note. They took wing three times during the morning, and each time their departure was heralded by a short conversation ; otherwise they were quite silent.

At 8.45 a.m. on November 12th, 1923, eight Swans, presumably of this species judging by their size and flight, were seen flying low over the Cardiff Docks, heading for the Pengam Moors and the sea.



BEWICK'S SWANS (*Cygnus b. bewickii*).
(Photographed by H. Morrey Salmon.)

PINTAIL (*Anas a. acuta*).—One male on Hensol Lake on March 2nd, 1924. This species is by no means a common visitor to the county.

LONG-TAILED DUCK (*Clangula hyemalis*).—An immature male on Llanishen Reservoir on October 21st, 1923, and an adult male on Kenfig Pool, November 11th 1923. These are the fourth and fifth specimens to be recorded.

SMEW (*Mergus albellus*).—Three appeared on the Roath Park Lake on December 30th, 1923, and remained until February 10th, 1924. They were all presumably females.

BLACK-NECKED GREBE (*Podiceps n. nigricollis*).—One was seen on Llanishen Reservoir on February 17th, 1924, and there were two there on February 24th. We watched them for a considerable time on the latter date. They kept together and were constantly diving, a considerable number of small fish, which appeared to be Miller's Thumbs, being caught and brought to the surface to be disposed of. The successful fisherman was invariably worried by its companion



BLACK-NECKED GREBE (*Podiceps n. nigricollis*) IN WINTER PLUMAGE.
(Photographed by H. Morrey Salmon.)

which would swim to within a foot or two, then dive, and come up alongside and endeavour to secure the catch.

These birds were still on the Reservoir on March 9th, but were not seen after that date.

GREEN SANDPIPER (*Tringa ochropus*).—One at Llanishen Reservoir on August 19th, 1923, and one on October 14th, 1923.

REDSHANK (*Tringa t. totanus*).—This species is extending its breeding range in the county, and on June 8th, 1924, we found two pairs in the extreme west of the Gower peninsula.

CURLEW (*Numenius a. arquata*).—Although not definitely recorded as breeding in Glamorganshire, it probably does so along the Brecknockshire border, as nests are common in the latter county. A pair were seen at Llanwonno on April 22nd and 26th, 1924, and although the nest was not actually found, we had no doubt that one was there.

BRITISH RED GROUSE (*Lagopus s. scoticus*).—This species was formerly common on the hills in the vicinity of the Rhondda Valley, but rapidly diminished in numbers after the opening up of the collieries. A few were known to have survived however, and bred regularly on the Llanwonno Hills; but on visiting that district on April 22nd and 26th, 1924, we found that they were reduced to one pair only.

ORNITHOLOGICAL NOTES FROM NORFOLK FOR 1924.

BY

B. B. RIVIERE, F.R.C.S., F.Z.S., M.B.O.U.

IN presenting my report on the Ornithology of Norfolk for the year 1924, I again acknowledge with grateful thanks the valuable assistance I have received from a number of correspondents who have sent me notes. I have also to record, with very deep sorrow, the loss of two most valued contributors to these notes in the Rev. Maurice C. H. Bird of Brunstead, who died on October 18th, 1924, in his sixty-eighth year, and in Mr. H. N. Pashley of Cley, who died on January 30th, 1925, in his eighty-first year.

The past year was chiefly notable for the extraordinary number of wild fowl which visited our coasts during January and February, and for the record bags of Woodcock which continued to be made up to the end of the 1923-24 shooting season.

Of these two remarkable immigrations I have already written elsewhere (*Trans. Norf. & Norwich Nat. Soc.*, Vol. XI., pt. v., 1923-24), so that I shall only refer to them more briefly in these notes.

The winter of 1923-24, which was a long and bitterly cold one, may be said to have begun at the end of the first week of November, and lasted well into March. The first two weeks of January were marked by frosts and blizzards, a particularly severe blizzard from the S.E. occurring on the night of the 8th, whilst from February 12th until the end of the month snow fell nearly every day, the thermometer on February 29th registering 12° of frost, and another heavy snowfall occurring on March 3rd.

The great rush of wildfowl appears to have taken place during the first fortnight of January, and although no unusual numbers of ducks were reported from inland waters, it must be many years since such a rich harvest was reaped by gunners on the marshes and estuaries of the coast.

Mr. A. F. Sherlock, and Allen the Breydon punt-gunner, who spent those two weeks on Breydon, both told me that in all their experience, dating back some twenty seasons, they had never before seen anything approaching the number of "fowl"—chiefly Wigeon—which were there, though, owing to the quantity of ice and the persistent high winds, they were unusually difficult to approach.

At Hickling, Salthouse, Cley and Blakeney it appears to have been the same.

I was at Cley on January 13th, and the flooded marshes were then covered with duck, including hundreds of Pochards, with Wigeon, Mallard, Teal, Tufted Duck, Pintails and Shoveler. Pintails occurred in unusual numbers for Norfolk, twelve being killed during the season at Cley, two by Mr. Sherlock on Breydon on January 12th, whilst Mr. Gunn the taxidermist received five or six more. "Hard-weather ducks"—Scaup and Goldeneye—were well represented, some very fine adult drakes of the latter species being killed early in January. Goosanders were numerous, Miss Turner reporting a flock of sixty on Hickling Broad during the second week of February, whilst I have records of seven being killed in other parts of the county. Smews were also much in evidence, and I knew of six having been obtained including two adult drakes.

Unusual numbers of Black-throated Divers were also met with, one taxidermist having received four, and another three, since Christmas. In contrast with our last hard winter of 1921-22, very few Grebes, however, seem to have put in an appearance. Mr. Sherlock obtained a Black-necked Grebe on January 5th on Breydon. Mr. Pashley received a Red-necked from Cley on February 16th, and Mr. Saunders a Slavonian on February 23rd, and these were the only ones which were reported to me.

A fresh arrival of Wild Swans took place early in January, thirty-six Whoopers being seen by Major Trafford to fly over Wroxham Hall, travelling from east to west on January 2nd, whilst on the 4th E. Ramm watched a herd of forty-six Bewick's Swans flying in the same direction at Cley. A mixed herd of both species arrived on Hickling Broad early in the month, where, orders having been given for their protection, they remained until the middle of March, and afforded Miss Turner the opportunity of obtaining some very remarkable photographs of them both swimming and upon the wing.

On Mr. A. W. Cozens-Hardy's marsh at Cley the total bag of ducks for the season was 768, consisting of eleven species in the following numbers: Teal, 356; Mallard, 188; Wigeon, 62; Sheldrake, 47; Pochard, 43; Shoveler, 41; Pintail, 12; Tufted Duck, 9; Gadwall, 4; Goldeneye, 4; Scaup, 2. At Fritton Decoy, Major the Hon. F. Crossley informs me, the total take of ducks from December 23rd, 1923, to January 18th, 1924, was 1,924, these being practically all Mallard.

As recorded in my notes for 1923, large flights of Woodcock arrived in Norfolk during December, and some very big bags

were made upon the coast during this month and throughout January, 1924. The curious feature of this immigration was that no good days were recorded from any inland shoots. In fact, at Swanton Novers, near Melton Constable, the most celebrated Woodcock covert in Norfolk, although the total bag for the season was 134, this was the worst season within the memory of Mr. Sharpe the head keeper. Upon shoots situated in the vicinity of the coast, however, some very large bags were made, and many previous records broken. At Somerleyton the total up to January 18th was 215 Woodcock, this being a record for the shoot, the largest number killed in one season previously being 196 (Major Hon. F. Crossley). At Holkham, the total for the season was 208, the best day being 32 on December 27th (A. E. Tower). At Snettisham 164 were killed, this also being a record for the shoot, the best day being 52 on January 21st (Lycett Green). Other good one-day bags recorded were Stiffkey, 31 on December 27th (Col. Groom); Cley, 26 on January 9th (Cozens-Hardy); Northrepps, 28 on January 4th; Trimmingham, 41 on January 7th; Gimingham, 30 on December 24th; Trunch, 21 on December 27th (G. Davey); Horning, 21 on December 28th (J. Habgood), and Mautby, 27 on December 19th (W. Cook).

SPRING MIGRATION.

Save for the unseen arrival of our summer visitors at their appointed time, and the presence for short periods upon our coasts of various passage-migrants of the Wader family, spring migratory movements in Norfolk are but little observed, because they are so little in evidence. There is a well-known annual spring movement along the coast-line from west to east of Hooded Crows and other *Corvidæ*, and the departure of a few of these birds across the North Sea, usually from the neighbourhood of Yarmouth and Lowestoft, which is occasionally seen, together with that of a few flocks of Starlings, Sky-Larks and Finches, is the only evidence we have of any return spring movement to north and east, and only represents a very minute fraction of the countless hordes of birds which arrive upon our coasts from northern and central Europe in the autumn. I believe the most probable explanation of this phenomenon is that the vast majority of our autumn immigrants are passage-migrants, which pass through England and cross the Channel, and that they return to their breeding quarters by another route, possibly via the western coast-line of France, Belgium, Holland and Denmark.

If there is little to be seen of a departure from our coast in spring, there is rather more evidence suggesting an arrival

at this period of the year. On many days throughout May, the *Sueda* bushes on Cley beach and elsewhere along the coast-line are full of Warblers, Flycatchers, Wheatears, etc., and although in the case of these small birds it is impossible to say where they have come from, one can only say that their behaviour is exactly the same as upon their arrival from across the North Sea in September.

In the case of birds which migrate by day, such as the *Hirundinidæ*, however, more can be learnt, and, as I have already pointed out (*Brit. Birds*, XI., p. 66), Swallows pass along the Norfolk coast-line in equally large numbers, following exactly the same route from east to west, and turning down the south-east shore of the Wash, both in autumn and spring. It is perhaps at first sight somewhat puzzling to find the same species of birds arriving upon the Norfolk coast and travelling in the same direction both in spring and autumn, but the fact that they do so is confirmed by a careful study of the spring records from lighthouses and lightships off the Norfolk coast in the B.O.C. Migration Reports, from which it will be seen, in the case of daylight migrants such as *Corvidæ*, Sky-Larks, Starlings, Finches, and occasionally the *Turdidæ*, where the direction in which the birds are flying is stated, that although there is a definite spring migration from the Norfolk coast across the North Sea from west to east, there is an equally large movement of the same species towards the coast from east to west (see also *Brit. Assoc. Rpt. on Migration*, V. (1883), p. 60).

Evidence of a spring passage across the North Sea was afforded this year by the following birds which, Mr. Patterson informs me, were picked up at high-water mark on Yarmouth beach. March 30th: Four Lapwings, one Golden Plover, two Redwings. April 2nd: Three Lapwings, one Golden Plover, one Hooded Crow, two Blackbirds, one Song-Thrush. April 3rd: Two Starlings, two Lapwings. April 5th: Three Lapwings. In which direction these birds had been travelling it is, of course, impossible to say, but if they met with disaster towards the end of their journey, which seems more likely than that they should have done so soon after they had started, the fact that they were washed up on this side rather suggests that they were bound for the Norfolk coast, and not leaving it.

Miss E. L. Turner and Mr. T. Coward, who observed the spring migration of 1924 at Scolt Head (*Trans. Norf. & Nor. Nat. Soc.*, Vol. XI., pt. v., p. 528), were able to record an almost continuous passage throughout May of Wheatears, Whinchats, Tree-Pipits, Redstarts, Willow-Warblers, Common

and Lesser Whitethroats, etc. All these birds were to be found skulking amongst the sandhills and *Sueda* bushes by the sea-shore, apparently wing-weary, and behaving in exactly the same manner as upon their arrival from overseas in autumn. As usual in the case of these small migrants, however, there was no indication of the direction in which they were moving, But, in the case of the daylight migrants, the experience of these two observers was the same as my own, namely that they were invariably travelling from east to west as is the case in autumn. Yellow Wagtails in ones and twos, and Swallows, Martins, Sand-Martins and Swifts in much larger numbers were seen steadily passing along the coast-line in this direction almost daily, and sometimes all day, throughout the month.

A large arrival of Willow-Warblers amongst the bushes on Cley beach was also noted by E. Ramm on April 26th and May 3rd, and by Mr. C. Borrer on May 13th, on which day large numbers of Swifts were also passing along the coast-line at Cley from east to west.

If it is a fact that these small migrants, which are annually to be found amongst the *Sueda* bushes along the Norfolk coast-line in spring, have, as their behaviour would seem to suggest, just arrived from overseas, they are probably birds which, instead of crossing the Channel, have travelled up the western coast-line of Europe and crossed the southern half of the North Sea to the Norfolk coast from east to west.

On the other hand, their presence upon the sea-shore might be explained by the fact of their having crossed the Channel and followed the eastern coast-line of England on their journey further north instead of travelling overland. It might also possibly be that they are birds which have crossed the Channel, worked up to the Norfolk coast, and are then about to take their departure across the North Sea to Scandinavia and northern Europe; but I think the fact that all the daylight migrants which are seen at the same time are moving in the opposite direction, namely from east to west, is against this latter theory, and I think on the whole there can be but little doubt that they are birds which have just arrived from across the North Sea.

AUTUMN MIGRATION.

Early signs of the autumn migration were evident at Scolt Head, where Miss Turner noted a continuous passage of young Lapwings from east to west on June 17th, 24th and

25th, and on July 12th and 13th. Wheatears and Yellow Wagtails were passing in the same direction almost daily throughout August, whilst on August 30th and 31st—the wind having turned from S. to N.E.—a marked arrival took place of Willow-Warblers, Chiffchaffs, Sedge-Warblers, Pied Flycatchers, etc.

The biggest arrival of these small passage-migrants, however, took place during the first week of September. As usual, it occurred with a strong N.E. wind, and was recorded simultaneously at Scolt Head (Miss Turner), Blakeney Point (R. Pinchen) and Cley (Pashley), as well as by Mr. G. H. Caton-Haigh on the Lincolnshire coast. The wind, which had been west for a few days previously, changed to N.E. (force 4 Gorleston) on September 3rd and remained in this quarter (force 5) on September 4th, and it was on these two days and the few days following that the "rush" occurred, and the *Sueda* bushes at Scolt Head, Blakeney, and Cley, were immediately filled with Redstarts, Whinchats, Flycatchers and various Warblers. On September 4th four Bluethroats and two Aquatic Warblers were obtained at Cley, and on September 5th a third Aquatic Warbler. By September 9th Miss Turner reported that all the birds at Scolt Head had passed on, but on that day Mr. F. C. Cooke found a large number of apparently fresh arrivals of the same species of birds, including some Bluethroats, on Gunton Cliff near Lowestoft.

On September 25th and 26th, the wind being again from the east, Miss Turner observed another immigration at Scolt Head which included Goldcrests, Blackbirds, Song-Thrushes; whilst on these two nights and that of the 27th large numbers of Grey Plover and other Waders were passing over Norwich in the rain, and several Knots were killed on the night of the 25th at Happisburgh Lighthouse (A. Patterson).

The weather during the last three months of the year was unusually mild and open, with an exceptional number of violent gales, much damage being done, both to shipping and inland, by those which occurred on October 21st, November 26th and December 27th. Unfortunately, Miss Turner was not able to remain at Scolt Head after the beginning of October, and the late autumn migration appears to have passed almost unobserved. No big rushes seem to have come under the notice of any of my correspondents, and the only note I have is of a large daylight arrival of Wood-Pigeons from off the sea at Mundesley on December 11th.

CLASSIFIED NOTES.

MAGPIE (*Pica p. pica*).—For many years the sight of a Magpie has been regarded as quite an exceptional event in this game-preserving county. As in the case of the Sparrow-Hawk, however, the result of four years' respite from the attentions of game-keepers during the war is still to be seen in their increased numbers in certain parts of Norfolk to-day. A keeper on an estate in the extreme south-west corner of the county told me that he had killed in 1924 twenty-eight Magpies and destroyed seven or eight nests upon his beat of some 2,000 acres, where prior to 1914 he had never seen a single bird. The Magpie being a very easy bird to trap or shoot, and its nest being easy to find, it must very soon, I should imagine, at this rate, be reduced to practical extinction again.

BLUETHROAT (*Luscinia svecica*).—On May 3rd a male was seen at Scolt Head by Miss Turner and Mr. Coward (*Trans. Norf. and Nor. Nat. Soc.*, Vol. XI., p. 530). On September 4th (wind N.E.5 Gorleston) during a "rush" of small migrants, four were obtained on Cley beach, whilst on September 9th two were identified by Mr. F. C. Cook on Gunton Cliff near Lowestoft. On October 9th another single bird was seen at Scolt Head by Miss Turner.

CROSSBILL (*Loxia c. curvirostra*).—The only Crossbill's nest which I have heard of in Norfolk in 1924 is one reported by Mr. N. Tracy at South Wootton. Unfortunately this nest was destroyed by squirrels after two eggs had been laid, and the birds did not build again.

SHORE-LARK (*Eremophila a. flava*).—In 1923, as recorded in my notes, Shore-Larks were still to be seen at Blakeney on April 19th. In 1924 they were even later in taking their departure, a flock of twenty being seen at "the Point" by Capt. Dawkes on May 2nd.

GREY WAGTAIL (*Motacilla c. cinerea*).—For the second year in succession a pair of Grey Wagtails nested at Taverham, the birds having remained in the locality throughout the winter. The first nest, which contained five eggs, was unfortunately destroyed when upon the point of hatching, but although no second nest was found the old birds were seen with five young ones in July. Possibly a second pair may have nested in the neighbourhood, as single birds were seen both at Weston and at Lenwade during April (Capt. L. Lloyd).

WAXWING (*Bombycilla garrulus*).—Two were seen at Keswick on February 7th (G. H. Gurney, *B. Birds*, XVII., p. 275).

AQUATIC WARBLER (*Acrocephalus paludicola*).—Two Aquatic Warblers were obtained by Mr. E. C. Arnold on Cley beach on September 4th, and a third was shot by Mr. Catling on September 5th.

NORTHERN WILLOW-WARBLER (*Phylloscopus t. eversmanni*).—A Willow-Warbler in the collection of Mr. C. Borrer, which was obtained at Cley on May 8th, proved to be of this northern race. Several examples of this form have now been taken on the Norfolk coast, both in spring and autumn.

WOOD-WARBLER (*Ph. s. sibilatrix*).—Mr. N. Tracy was able to report four nests at South Wootton in 1924, as against two in 1922 and 1923.

REDSTART (*Phœnicurus ph. phœnicurus*).—In 1923 I was able to record the return of the Redstart as a nesting species to Norfolk after an almost complete absence for many years, three pairs having nested at South Wootton, one pair at Weeting, and one pair at Keswick. In 1924 they seem to have confined themselves still more to the extreme south-west corner of the county, for although Mr. Tracy was able to report six nests within and around his bird sanctuary at South Wootton, these were the only ones reported to me. Early in June I looked in vain for a pair at Weeting, whilst at Keswick, Mr. G. H. Gurney writes me, no nest was found, although a pair were seen there on May 21st.

HOOPOE (*Upupa epops*).—A pair of Hoopoes were twice seen early in May at Swanton Novers (Mrs. Lascelles). On August 28th a Hoopoe appeared in the garden of Mundesley House, Mundesley-on-Sea, where, thanks to Miss Johnson, it remained unmolested, and was to be seen practically every day, until September 18th, when it took its departure. I watched it for a considerable time on September 7th, and it was delightful to see it working the tennis lawn in almost exactly the manner of a Starling, pushing its long bill, with the mandibles slightly open, here and there into the soft turf, sometimes right up to the face-feathers, and occasionally throwing back its head as it swallowed a grub. It is, I think, worth recording that the gardener at Mundesley House, as soon as he saw this bird, informed Miss Johnson that one exactly similar had frequented the garden for a week or two at the same time of year in 1923, Miss Johnson being then away from home.

SHORT-EARED OWL (*Asio f. flammeus*).—Five pairs of Short-eared Owls are known to have nested in the Broads district in 1924, and all got off successfully. This is the largest number of nests of which I have any record.

MONTAGU'S HARRIER (*C. pygargus*).—It is pleasant to be able to record that more Montagu's Harriers certainly nested in Norfolk in 1924 than within the memory of any living man. Seven pairs successfully reared broods within their favourite protected area of the Broads. Another pair hatched out on a marsh in a district which is new to them as a nesting ground, whilst a ninth pair frequented yet a third locality throughout the summer, and, although this nest was never found, there can be but little doubt that they bred there, as the cock was frequently seen feeding the hen in the air.

HEN-HARRIER (*Circus c. cyaneus*).—An adult female was killed at Postwick on February 28th.

MARSH-HARRIER (*C. æ. æruginosus*).—I saw a Marsh-Harrier in the Broads district on April 6th, and was told by the keeper that it had been in the locality for a week or more. Shortly afterwards, however, it disappeared.

OSPREY (*Pandion h. haliaëtus*).—During the last three weeks of September an Osprey frequented Fritton Lake, where it was seen to catch a fish on September 9th (Hon. J. Crossley). On October 10th a male was killed at Gunton, whilst on November 6th another male was shot at Barningham, this latter being in all probability the same bird which had been observed at Felbrigg Ponds for some days previously (G. H. Gurney).

BLACK STORK (*Ciconia nigra*).—On June 9th a Black Stork was seen flying over Scolt Head, whence, after circling round and rising to a great height, it disappeared out to sea to the north-east. It certainly could not have selected a more favourable opportunity for having its visit recorded, as it so happened that the members of the Norfolk and Norwich Naturalists' Society were upon that day visiting the island, and were, at the moment of the Black Stork's appearance, all assembled for tea! It was, therefore, seen by so many good observers, including Miss E. L. Turner, Dr. Long and Col. Todd, that there can be no doubt as to its having been correctly identified.

SPOONBILL (*Platalea l. leucorodia*).—A considerable number of Spoonbills visited both Breydon and Cley Marshes during 1924, the cause of their annual appearance in Norfolk during the height of the breeding-season remaining a mystery. Five arrived at Breydon on June 18th, where on the 24th they were joined by a sixth. These stayed until July 3rd, when four left. On July 5th the remaining two were joined by a third, and on the 13th by a fourth, all four birds leaving next day. One was again seen at Breydon from August 4th–7th and from August 9th–11th.

At Cley four birds arrived on the unusually early date of March 27th and remained until the 30th. This is the earliest date of which I have a record for the arrival of Spoonbills in Norfolk, the only other March occurrence being in the year 1908, when one was seen on Breydon on March 31st. No more were seen at Cley until June 16th, when a single bird appeared. On June 30th there were three on Mr. Cozens-Hardy's marsh, on July 2nd four, on July 3rd five, and on July 9th six. These six birds appear to have stayed in the locality for the remainder of the month, as they were seen upon the same marsh on July 16th, 23rd, 24th and 25th.

LEACH'S FORK-TAILED PETREL (*Oceanodroma l. leucorrhoa*).—One was picked up under the telegraph wires on Cley beach on September 10th (A. H. Macpherson).

LITTLE BITTERN (*Ixobrychus m. minutus*).—Early in June a Little Bittern was seen at the same spot in the Broads district where one was seen in July, 1923, and by the same observer, the correctness of whose identification can, I think, be relied upon. This was certainly a curious coincidence, as upon each occasion it was afterwards both watched and searched for, but was never seen again, and hopes that it might have been one of a nesting pair were not realized.

BITTERN (*Botaurus s. stellaris*).—The Bittern is now well established in Norfolk as a breeding species, and appears to be extending its range. I learn from Major J. B. H. Benn that two pairs almost certainly nested in 1924 in a new area on the eastern side of the county, where, although no nests were found, the birds were watched during the nesting season constantly flying to and fro between the reed beds, and evidently feeding young.

GREY LAG-GOOSE × CANADA GOOSE HYBRIDS—In my notes for 1923 (*Brit. Birds*, Vol. XVII., p. 269) I referred to the fact of a wild Grey Lag-Goose having, during the summer of that year, paired with a Canada Gander at Holkham, and reared five hybrid goslings. On June 21st, 1924, I had the opportunity of seeing these five hybrids, together with their Grey Lag mother, amongst the large flock of Canada Geese on Holkham Lake. In size the hybrids were about half way between the two species, whilst in colouring the resemblance to the Canada sire was obvious, though the cheeks of the hybrids were greyish instead of white, and their necks dark brown instead of black. Mr. A. E. Tower told me, that although the Grey Lag-Goose again remained behind with the Canada Geese last summer, for the fifth year in succession, she has shown no further signs of nesting.

FERRUGINOUS DUCK (*Nyroca n. nyroca*).—Miss E. L. Turner informs me that on October 9th she watched for some time, at sufficiently close range to make identification certain, a drake, *Nyroca nyroca*, swimming upon a small sheet of water beside Norton Creek, Scolt Head.

GARGANEY (*Anas querquedula*).—In spite of the careful protection which has now for many years been afforded it within the area where it has for so long bred, the number of nesting pairs of Garganeys remains each year about the same, and there has been but little sign of any extension of its range to other parts of Norfolk. During the past year four pairs were observed in the usual locality of the Broads district, and three nests were found.

SPOTTED REDSHANK (*Tringa erythropus*).—A considerable number of Spotted Redshanks again put in an appearance during the year. On March 20th several had arrived on Salthouse Marshes (Pashley). On May 27th one was seen by Jary the watcher on Breydon. On July 23rd one, and on July 27th two, were seen by E. Ramm at Cley. On September 9th one was seen by Mr. A. H. Macpherson at Salthouse. On September 11th three or four were seen and one was shot near Brancaster, whilst single birds were seen at Scolt Head on September 11th, 14th and 21st (Miss E. L. Turner). On December 26th one was shot at Cley (E. Ramm). This latter makes, I believe, the third winter record for this bird in Norfolk, the first being one which was killed on February 20th, 1904, at Blakeney Point (*Norf. and Norwich Nat. Soc. Trans.*, Vol. X., p. 273), and the second one seen by E. Ramm at Cley on December 19th, 1923 (*Brit. Birds*, XVII., p. 271).

RUFF (*Philomachus pugnax*).—Ruffs and Reeves did not visit Norfolk either in spring or autumn in anything like such large numbers as was the case in 1923. A few were noted in the Broads district at the end of March and during the first week of April, but they only stayed a few days, and none were seen at Cley during the spring. On July 2nd I saw two Ruffs and a Reeve at Cley, and on July 10th a single Reeve in the Broads district, and on August 17th Mr. C. Borrer noted a few at Salthouse, where a larger number were seen by Capt. L. Lloyd on August 25th.

BLACK-TAILED GODWIT (*Limosa l. limosa*).—Black-tailed Godwits again visited Norfolk in considerable numbers, both on their spring and autumn passages. On April 13th an adult male in almost perfect breeding plumage was picked up in an injured condition in a market garden at Blundeston (E. C. Saunders). On April 21st four appeared on Cley

Marshes (Pashley), where on May 23rd another single bird was observed by Mr. C. Borrer. On June 29th and August 10th single birds were seen on the same marsh by E. Ramm. On August 17th one was seen at Salthouse (C. Borrer) and on August 25th another (Capt. Lloyd). Between September 1st and 4th one was again on the Clay Marshes (Pashley). On September 17th an immature bird was shot at Salthouse (Pashley), whilst the last was seen by Miss Turner at Scolt Head on September 24th.

AVOCET (*Recurvirostra avosetta*).—On August 16th an Avocet was killed near Yarmouth (Saunders), and on August 25th another, which had frequented Cley and Salthouse Marshes for more than a week, unfortunately met with the same fate. It is four years since the last Avocet was recorded in Norfolk, and it is a matter for very great regret that, when they do visit us, these beautiful and easily identified birds should so seldom be allowed to survive.

BLACK TERN (*Chlidonias n. niger*).—In contrast with the previous year, very few Black Terns appear to have visited Norfolk in 1924. I have no records of any having been seen during the spring passage, and only a few passed through in the autumn, these being noted at Blakeney and Cley during the month of August.

SANDWICH TERN (*Sterna s. sandvicensis*).—Sandwich Terns nested in 1924 in Norfolk in increased numbers, three separate colonies being now well established at Blakeney Point, Salthouse and Scolt Head.

At Blakeney Point some 300 pairs nested, about fifty per cent. of the nests containing two eggs, one nest containing a clutch of three, and the remainder single eggs, a good many of which were eventually deserted. All the eggs were laid upon bare sand around and upon small, recently formed marram hills, no attempts at nest-building being made. The first birds arrived on April 19th, and the first young bird hatched out on June 19th.

At Salthouse Broad 403 nests were counted, 194 of which contained two eggs, and the remainder single eggs. Here the nesting-site is on a grass-covered island, and more or less substantial nests of dead grass, driftwood, etc., were made. Incubation would appear to have begun earlier than at Blakeney, more than half the eggs being hatched on June 18th.

At Scolt Head the first Sandwich Terns arrived on April 30th, and on May 30th nine single eggs had been laid, but these were almost immediately deserted, and the birds all left. On June 7th there was a fresh arrival, and on June 8th

eight fresh nests were found, each containing a single egg. On June 22nd there were twenty-eight nests, and on July 5th thirty-five, fifteen of which contained clutches of two, and the rest single eggs. The first young bird hatched out on June 25th.

ROSEATE TERN (*Sterna d. dougallii*).—In my report for 1923, I left the question as to whether the Roseate Tern nested that year at Blakeney Point as "non-proven," for although at least two pairs were seen there throughout the nesting season, neither Pinchen the watcher, nor Mr. T. Coward, who stayed at the "Point," for ten days, nor, so far as I was aware, any other ornithologist who visited the colony, had been able to mark the birds down to a nest. A letter has, however, since appeared in the *Field* (April 24th, 1924) from Mr. Andrew K. Gibbon, stating that in 1923 he marked down a Roseate Tern to a nest, from which he again flushed it, containing two typical eggs, at the Blakeney Tern Colony.

In 1924 a pair of Roseate Terns nested and hatched out in another Norfolk Tern colony. They were first seen by Miss Turner and myself on June 22nd, when they were being persistently mobbed by the Common Terns, who would scarcely allow them to settle anywhere in the colony, and early in July the nest was found. On July 5th I was able to watch the sitting bird from behind a small sandhill less than fifteen yards away, and saw the pair change places on the nest. The first young bird hatched on July 17th and the second not for four days later, and one at least was successfully reared.

COMMON GULL (*Larus c. canus*).—As already reported in *British Birds* (Vol. XVIII., p. 191) a Common Gull ringed by P. Skovgaard on Saltholm, near Copenhagen, in 1923, was caught by Mr. J. O. Sells at Kelsale, Norfolk, on February 7th, 1924, and again released, still bearing its ring. This is the second Common Gull, ringed as a nestling in Denmark, which has been reported in Norfolk during the winter months (see Vol. XVII., p. 260).

BLACK-HEADED GULL (*L. v. ridibundus*).—Towards the end of March a Black-headed Gull was picked up dead at East Dereham bearing a leg-ring with the following inscription: "41617 Pedersen, F. R.—Sund, Danmark." Upon communicating with Herr Pedersen, I received from him a letter stating that this Gull was ringed as a nestling on a small island in the Firth of Roskilde, Sjaelland, Denmark, on June 7th, 1922.

LITTLE GULL (*L. minutus*).—An immature Little Gull was seen at Salthouse by Mr. C. Borrer on August 17th. Another,

also immature, was killed on Breydon on December 28th (Saunders).

GLAUCOUS GULL (*Larus hyperboreus*).—In spite of the exceptionally hard weather prevailing in N.W. Europe during the first two months of the year, only one Glaucous Gull was, as far as I can ascertain, recorded, this being an adult bird which was obtained at Cley on January 11th (Pashley).

ARCTIC SKUA (*Stercorarius parasiticus*).—A considerable passage of Arctic Skuas was noticed at Blakeney during the middle of September, and four were obtained by gunners on September 16th (A. H. Macpherson).

GREAT SKUA (*Stercorarius s. skua*).—On September 6th Mr. A. H. Macpherson watched a Great Skua chasing the Sandwich Terns at Cley.

DEMOISELLE CRANE (*Anthropoides virgo*).—As already recorded (*Brit. Birds*, Vol. XVIII., p. 83), a full-winged Demoiselle Crane was seen by the writer on June 17th to fly in from the north over Cley beach, and alight on Wiveton Marshes, where it remained until midday on the 18th, after which it was seen no more. In spite of its presence having been recorded, no news has since come to hand of an escaped bird, and it seems to me at least within the bounds of probability that it may have been a genuine wild migrant.

BLACK GUILLEMOT (*Uria g. grylle*).—On November 1st a male was captured just off shore at Cley (Pashley).

LAND-RAIL (*Crex crex*).—The Land-Rail has, I believe, become extremely rare as a nesting species in Norfolk, where fifty years ago it would appear to have been abundant. I have no record of its having bred in the county since the year 1900, though a few are still to be met with almost every year during the autumn migration. In 1924 a pair almost certainly nested at Ickburgh, where one was to be heard "craking" nightly throughout May and June in a small field of grass. Attempts to find the nest were unsuccessful, though the bird was flushed upon more than one occasion.

QUAIL (*Coturnix c. coturnix*).—Two Quails were killed by telegraph wires during the month of May, one at Cley, and one near Aldburgh. The latter bird was a female, which upon dissection showed signs of having already laid part of a clutch of eggs (E. Gunn).

THE EFFECT OF HOT SUN ON YOUNG BIRDS.

BY

ALBERT H. WILLFORD.

IN 1923, and again in 1924 whilst engaged in photographing Sky-Larks (*Alauda a. arvensis*) at their nests, I have had good opportunities of observing the ill effect of hot sun on young birds, and although this is, of course, already known the following details may be worth recording.



“ WITH ALL HER FEATHERS RUFFLED—AND PANTING.”

In June, 1923, I found a nest containing three strong young about five or six days old, but on my arrival at the nest three days later I was surprised to find one of them lying dead outside the nest, and one of the two inside apparently suffering from some ailment. I looked round and found no signs of violence, so, still mystified, decided to get into the hide and see what could be learnt from observation. I had only been settled in the tent for a short time, when the female appeared alongside the nest carrying food in the form of grubs, but the

young displayed no anxiety for food, so quickly disposing of it herself she walked on to the nest and commenced to brood them.

After some twenty minutes spent in shuffling round and anxiously turning the dying young one over with her beak she departed, and it was during her absence that the sickly



“ SHE STOOD OVER THE NEST—AND SPREAD OUT HER WINGS.”

young one died, while the remaining one, I noticed, was not looking so lively as when I first arrived. The sun by this time had got overhead and was blazing down on to the nest, the grass alongside being too short to offer any shade. The female was soon back again with more food, but, as before, met with a refusal, so was compelled to eat it herself, after

which she sat on the nest again. The great heat was evidently being felt by her for she sat with all her feathers ruffled to admit the air to her skin, and with her beak open, panting quickly as a dog does after strenuous exercise. She shuffled about, trying to revive the dead young one by turning it over with her beak, for twenty minutes or more, after which she stood up and commenced to chirrup and look round, as though calling up her mate, but receiving no answer she flew away.

Within a few minutes of her departure the last of her progeny died, and on her return some ten or fifteen minutes later she brought no food, and after giving a rather pathetic look at her dead offspring she again flew away. I waited for another half-hour but there was no sign of her return.

In 1924, whilst engaged on a Sky-Lark's nest, I observed the ill effect of the hot sun on young birds once more. This nest was situated in very long grass and contained three fine, healthy young about five days old.

I parted the grasses in front of the nest to admit light and give me a clear view just before getting into the hide. I had been "hidden up" for some twenty minutes, and the sun had come out and was shining right on to the nest when I noticed that the young began to get listless and droop their heads. I was on the point of going out to shelter them with grasses, when the female appeared near the nest with food; only one of them, however, would accept the proffered grubs. She therefore stood over the nest with beak agape and panting, and at the same time spread out her wings to give her chicks the shade they were so badly needing. One, however, had collapsed on the front of the nest and its head was not in the shade; noticing this, she promptly pushed him back into the nest with her beak. She stood over them in this manner for nearly half an hour, and then flew away.

I could see that the young had greatly benefited through being shaded by the mother. I was now quite convinced that it was the hot sun that had caused the illness of these chicks and the death of those of the previous year, so put the grasses back over the nest on the sunny side so that all the nest was in the shade, and moved my hide round to another position. I had no sooner got settled in the hide than the female returned and fed the young, which this time took their food quite well, whereon she promptly departed.

Whilst I remained she made seven or eight visits with food, and on no occasion did she stay to brood or shade them, this being unnecessary since the grasses were now providing all the shade that was required.

ON THE EFFECT OF EXTREME COLD ON BIRDS.

BY

WM. ROWAN.

IN view of the diversity of opinions held with regard to the causes of death amongst birds in severe winter weather, the following brief observations made at Edmonton, Alberta, Canada, on birds in captivity under such conditions may be of interest.

I have this winter (1924) been carrying out certain experiments on one of our common Sparrows, *Junco hyemalis*. I trapped the birds in the autumn and housed them in large open aviaries in the garden. One side and a half of each aviary is open, the rest boarded, and the whole roofed over. Perches are provided by growing shrubbery as well as a few branches swung from the roof across the more sheltered corners. The birds were fed on canary seed, millet, hemp and the seeds of various wild plants on which they habitually feed in freedom. Water was provided for the first few weeks, but as it was ignored after the first snow had drifted into the cages and it had to be replaced so frequently on account of freezing, it was subsequently given up.

Our first cold spell arrived on the heels of a blizzard on the evening of October 30th. It lasted for two weeks with the thermometer either just above or just below zero (Fahrenheit). This had no apparent effect on the birds, and those killed for examination in the course of the experimental work were in fine condition and very fat.

After this the weather turned milder, zero being recorded only twice up to the night of the 13th December, when another blizzard arrived and the thermometer dropped to about 30° below. It continued to drop till the lowest temperature was reached on the following Wednesday at 52° below zero. By Saturday it had risen to 16° below and on the Monday it was once again a few degrees above zero.

It is impossible in words to describe the intensity of coldness that 30° below zero, when a gale is blowing, actually represent, but it is infinitely worse than 60° below without a wind. That any small birds can survive it seems a miracle. The gale was from the south-west and blowing at a slant right into the open sides of the aviaries. When I went out in the evening to feed them I hardly expected to find my *Juncos* alive, and at first I actually thought they were all dead, for not one of the usual perches was occupied. I soon discovered, however, that they were all alive, but on the ground. The next day one or two were perching again but the rest were still on the ground and though able to fly were very lethargic.

On Tuesday the majority were perching again, and on Wednesday only one was still confined to the ground. All were distinctly inactive during this period. That evening I brought indoors the three birds that yet remained for the completion of the first experiment, the thermometer still being on the down grade at 50° below zero. I was afraid of losing them at this late stage, which would have been a catastrophe. Twenty minutes after getting into the warmer air the last bird was perching. Examination of this Junco upon being caught proved its disability to be due to ice on the feet. This had melted in less than twenty minutes, and the bird recovered. All three on being brought in had patches of ice on the head and wings which they had acquired on the first cold night and apparently retained since. None of them had come to any serious harm through the cold. Presumably their feet are not susceptible to frostbite, for in spite of their temporary encasement in ice they were none the worse. The remaining Juncos and a White-throated Sparrow (*Zonotrichia albicollis*) have since that time been exposed to more weather of 40° below zero, but have remained lively through it all. I have not noticed any further icing of the feet, which was probably due to the blizzard.

My birds were of course well fed, for all the food they needed was available. They weathered the blizzard successfully although exposed to its full blast, but appeared to suffer much more than with the thermometer even at 52° below zero, but without wind.

The case was very different with the ubiquitous House-Sparrow (*Passer domesticus*), locally abundant. Many, even right in the city, were picked up dead. One attempted to get into the aviaries and froze to death with food just out of reach on the other side of the netting. This, and the only other I was able to secure, had empty stomachs. Horse traffic is comparatively scarce in all western towns, and the little horse dung naturally available was mostly buried in the large snowfall that accompanied the storm, and that exposed was frozen hard. Other sources of food would be diminished in the same way. Hence sufficient food was not procurable for these wild birds and the result was death. The number of House-Sparrows to succumb must have been quite considerable, for there have only been a few in place of scores in our immediate neighbourhood since the blizzard, and the same appears to apply to Edmonton generally. The primary cause of death was no doubt starvation and not cold. The Chickadee (*Parus a. atricapillus*), another abundant winter bird with us, in spite of its diminutive size and frailty, survived in practically undiminished numbers

(I have heard of one being found dead), but its food supply, of an entirely different nature, never became inaccessible. The uninterrupted and intense cold safeguarded the trees from glazing and ensured the Chickadees their chance of survival. It is quite possible that the few deaths amongst them may have been due to frozen feet, for a Tit unable to perch would certainly run the risk of speedy starvation. All my Juncos got their feet iced during the blizzard, but I have no doubt that they were more exposed than most wild birds which would be able to hunt out protected corners under tree-trunks, etc. Some had already cleared their feet by Monday (probably by pecking), and only one remained still incapacitated by the Wednesday.

In a letter received from an ornithological friend, Mr. F. L. Farley, in the country, I learn that innumerable Snow-Buntings (*Plectrophenax nivalis*) were picked up dead on farms after the blizzard, chiefly on and around grain stooks. On these they were doubtless seeking food as a Snow-Bunting that I took out of a Richardson Merlin (*Falco columbarius richardsoni*) early in December had practically nothing but wheat kernels mixed up with the remains of its viscera. Here again there seems little doubt that their sources of food had become inaccessible (buried under many inches of driven snow), and starvation followed, resulting in death.

There is one other interesting point worthy of mention, since it may well be a factor in the rate of mortality. My experimental birds were killed off at regular intervals during October, November and December. On account of the size of the aviaries it was impossible to catch them by hand and I had to resort to the use of a butterfly net. Even so, it took some time to catch the desired individuals. But during the intensely cold spell only a couple of minutes sufficed to catch all the three birds required, on account of rapid exhaustion. In fact it would have been easy to catch them all by hand in a few minutes. Exactly the same thing was noticeable when I caught three more a couple of weeks later with the thermometer at 42° below zero. This was not the result of confinement, for one of these birds escaped shortly after in a high-walled room and when it was finally secured after ten minutes' effort, it was only got by a ruse. The bird showed few signs of fatigue. It is quite conceivable that this lack of energy might militate seriously against success in a hunt for food at a time when a particularly strenuous effort would be required.

Fatigue may perhaps have a more particular bearing on the rate of mortality. It was noticed every time that the Juncos were visited, whilst they had ice on their backs, that

they were steaming. It was evident that the radiation of heat from their bodies was much more rapid than is generally supposed. In view of this fact it is quite conceivable that if daybreak (there are sixteen hours of darkness at Edmonton at Christmas time) presented conditions that precluded the possibility of finding food promptly, the smaller species, at least, might succumb to cold in a very short time. In such cases as that of the Sparrows, cited above, which found their food scarce and hard to get early in the morning, constitutional lethargy might well be the chief factor in determining their fate. Starvation would still be the ultimate cause of death.

The origin of the patches of ice on the plumage is something of a mystery. These were first noticed after the blizzard. While suffering from iced feet, attributable readily enough to blizzard conditions, the Juncos were confined to the ground, where they would huddle in protected corners for warmth at night. So confined, their breath might well condense and freeze on their plumage during the early morning, when the rate of metabolism and production of heat would be at a minimum. No note was taken, unfortunately, of the occurrence and persistence of the ice patches, but it is likely that they were produced fresh each night. If this is the correct interpretation, it would indicate still further the vital necessity of food at daybreak.* When they were again perching, ice was apparently not formed. This should be so, with the birds unconfined, sleeping on open twigs. But it seems unlikely that the blizzard could have produced the ice patches, or, had it done so, that they could have persisted for four days.

The rate of loss of heat in such birds as the Chickadee, weighing only part of an ounce, is a problem well worthy the attention of physiologists. It can readily be seen that the relative lengths of daylight and darkness during cold weather must be of great moment to birds. Migration has solved the problem for the majority of species. By what physiological adaptations have the small residents found a solution of the same problem?

These comments support the view expressed by Jourdain and Witherby in their article on the effects of the 1916-1917 winter on birds in England (*British Birds*, Vol. XI., p. 266).

*Since writing the above, a friend who keeps a food-tray on her window-sill throughout the winter at Red Deer, Alberta, has informed me that Chickadees frequently come to feed in the early mornings during the very cold spells, with patches of ice on the head, particularly around the eyes. From the curled condition of their tail-feathers it is evident that they have spent the night huddled in holes. This would bear out the view that ice may be produced at night in confined sleeping quarters.

NOTES

SOME ABNORMAL EGG MEASUREMENTS.

THE following are the measurements of a few unusual eggs, taken in West Cornwall. To facilitate comparison I have in each case appended the average measurements as given in *The Practical Handbook*.

CARRION-CROW (*Corvus c. corone*).—In a nest found on April 16th, 1921, were two normal eggs and an unusually small one, measuring only 35.5×26 . A Magpie built in the same clump in 1922, but in 1923 a Crow again built there and laid two eggs, the first of which was laid on April 13th, and measured 49.1×27.5 , while the second was normal. The length of the first egg, though not so great as in the one recorded in *British Birds*, XVIII., p. 108, yet being coupled with width considerably below the average, gives it a peculiar cigar-shaped appearance (Average 43.5×30.1).

MAGPIE (*Pica p. pica*).—On May 5th, 1919, I took an egg measuring 40×26.3 from a nest containing also six normal eggs (Average 32.9×23).

CHAFFINCH (*Fringilla c. cælebs*).—Two eggs from different nests measure 23.2×13 and 22×14 respectively (Average 19.3×14.6).

SONG-THRUSH (*Turdus philomelus clarkei*).—An egg found on April 14th, 1922, in a nest with two normal eggs, measured only 17×12.8 (less than the average Linnet). This egg was normal in colour (Average 28.7×20.9).

BLACKBIRD (*Turdus m. merula*).—A deserted egg taken on May 22nd, 1923, measured 35.5×22 (Average 29.4×21.6).

ROBIN (*Erithacus rubecula melophilus*).—On April 4th, 1923, I found a nest containing a normal egg and one measuring only 16.7×13 . Three other normal eggs were subsequently laid (Average 19.8×15.5).

G. H. HARVEY.

CHIFFCHAFFS IN WINTER IN PEMBROKESHIRE.

WHEN I was in Pembrokeshire, from December 19th, 1924, to January 6th, 1925, I was rather surprised to see quite a number of Chiffchaffs (*Phylloscopus collybita*) in the woods along the shore, particularly along the Carew river and the Pembroke river. The Chiffchaff is more common round Pembroke in April than in any other locality I have visited, and it seems quite possible that in a really mild winter a number should not migrate.

J. H. OWEN.

HEN-HARRIER IN ESSEX.

WITH reference to Mr. Glegg's note (*antea*, p. 242) on the Hen-Harrier (*Circus cyaneus*) in Essex, it may be worth recording that Mr. King shot one at Great Canfield soon after the war, but unfortunately has not the exact date. It was late in the year and was an adult female in beautiful plumage. It was set up for the late Mr. Frankham, who gave it to Mr. King and it is still in his possession.

J. H. OWEN.

WHITE-FRONTED GEESE INLAND IN CHESHIRE.

ON January 17th, 1925, I saw, flying in the Bollin Valley, over Prestbury sewage farm, two White-fronted Geese (*Anser albifrons*). They flew straight towards me at a fairly low altitude, and I was able, through my binoculars, to see quite clearly the white round the base of the bill and dark bars across the lower breast. I can find no record for inland Cheshire in Mr. Coward's "Fauna," nor does Mr. Hendy mention the species in his paper on "Birds of Alderley Edge."

Thinking they might be "escapes" from some local park I wrote to the *Manchester Guardian* asking if anyone could throw any light on the matter, but I have received no replies.

R. M. GARNETT.

SHELD-DUCK IN BEDFORDSHIRE.

As the Sheld-Duck (*Tadorna tadorna*) is an infrequent visitor to the inland counties, it may be worth recording that a bird of this species spent the day (February 22nd, 1925) on one of the Woburn Park ponds.

M. BEDFORD.

FERRUGINOUS AND LONG-TAILED DUCKS IN SOMERSET.

ON November 4th, 1922, a Ferruginous Duck (*Nyroca n. nyroca*) was killed during a shoot at Blagdon Reservoir, north Somerset, and was recorded by Mr. Donald Carr, the ranger of the reservoir, in the *Report of the Wells Natural History and Archæological Society* for 1922. We have lately had an opportunity of examining this bird and confirming the identification. It is an immature specimen with mottled underparts. This is the first and only conclusive record of the occurrence of this duck in Somerset, though curiously enough a probable second record was obtained by Mr. Stanley Lewis at Barrow Gurney at about the same season of the following year (*Brit. Birds*, Vol. XVII., p. 188).

On January 6th, 1925, also at Blagdon Reservoir, we had an excellent view, at very close range, of a pair of immature Long-tailed Ducks (*Clangula hyemalis*). There appears to be only one other record of this species for the county, that of an immature specimen shot near Weston-super-Mare on December 16th, 1890 (*Zoologist*, 1891, p. 66). We learn with regret that one of these birds was subsequently shot, while the other was wounded and is at the time of writing (February 16th) still on the water.

F. L. BLATHWAYT.

B. W. TUCKER.

The Irish Naturalist.—We greatly regret to learn that, owing to present-day high costs of production and a narrowing circle of supporters, this magazine, which for thirty-three years has recorded so much of interest to Irish naturalists, has now come to an end.

RARE BIRDS IN IRELAND.—In the *Irish Naturalist* (1924, pp. 101–108) Dr. F. W. Rogers Brambell gives details of some rare mounted birds from the Blake Knox collection which have come into his possession. Unfortunately, the only data available are written on the stands on which the birds were mounted, except in those cases where the birds can be connected with published records. The more important of those previously unrecorded are as follow: KITE (*Milvus milvus*) “found dead on beach at Kilcool, co. Wicklow, and probably shot by self some days before at sea in a fog. November. Fired at for an Eagle representative.” These words written on the stand by Blake Knox himself provide all the known information about this bird, which he seems never to have recorded. Ussher, in his *List of Irish Birds*, could not substantiate any recorded Irish occurrence. DOTTEREL (*Charadrius morinellus*), co. Mayo, February 9th, 1889, is an unusual date and probably the first reported occurrence for Connaught. GREAT SKUA (*Stercorarius skua*), specimens from co. Wicklow, September 1864; co. Mayo, October; Dublin Sea, October. SOOTY SHEARWATER (*Puffinus griseus*), co. Mayo, October.

HOODED CROW IN LONDON DISTRICT.—Captain H. F. S. Stoneham writes us that he observed on February 20th, 1925, a *Corvus c. cornix* on Wimbledon Common.

SUBALPINE WARBLER AT ISLE OF MAY.—A third British occurrence of the Subalpine Warbler (*Sylvia c. cantillans*) is recorded by the Misses L. J. Rintoul and E. V. Baxter (*Scot. Nat.*, 1924, p. 126) as having appeared on the Isle of

May on May 30th, 1924. It is curious that the only three examples of this southern warbler recorded for Great Britain should have been found in Scottish islands.

LITTLE OWLS IN NORTH YORKSHIRE AND NORTHUMBERLAND.—Mr. H. B. Booth records (*Nat.*, 1924, p. 348) that he inspected a specimen of *Athene noctua* which was shot on the Halnaby estate, near Darlington, in 1923. There was a pair and the birds were believed to be breeding, but after the one was shot the other disappeared. Mr. R. Fortune records (*t.c.*, 1925, p. 86) that he obtained a Little Owl from near Harrogate on January 9th, 1925. Mr. V. Pape records (*Field*, 28th August, 1924, p. 357) that he saw an Owl which appeared to be of this species on August 17th, 1924, near Newcastle.

FULMAR PETRELS IN CO. CLARE.—Mr. A. W. Stelfox records (*Irish Nat.*, 1924, p. 123) that he saw Fulmars (*Fulmarus glacialis*) on the cliffs of Moher, co. Clare, in the first week of July, 1924, and that they appeared to be breeding. No details are given of numbers. This appears to be a new locality for the Fulmar.

RED-NECKED PHALAROPE BREEDING IN CO. DONEGAL.—Mr. C. V. Stoney announced (*Brit. Birds*, XVI., p. 295) that in June, 1916, he saw a pair of *Phalaropus lobatus* in a hitherto unknown breeding locality, but did not find the nest. He now states (*Irish Nat.*, 1924, p. 109,) that on July 3rd, 1924, accompanied by Messrs. G. H. Lings and G. Tomkinson, he revisited the spot, not far from the coast in co. Donegal, when again a pair of these birds was seen and this time a nest with an addled egg was found, and subsequently two chicks with their parents were seen.

COMMON SANDPIPER IN KENT IN WINTER.—Miss A. V. Stone informs us that on January 16th and again on the 26th, 1925, she saw a *Tringa hypoleucos* at the same spot on the Stour Estuary at Sandwich. (*Cf.* Vol. XVII., p. 248.)

REVIEW.

Report on Scottish Ornithology in 1923, including Migration. By Evelyn V. Baxter and L. J. Rintoul. (Reprinted from *The Scottish Naturalist*, 1924, pp. 105-120, and 137-161).

THESE authors are once again responsible for a most valuable Report, which should be studied by all interested in British Ornithology. The mild spring of 1923 produced some early nesting records, and while there were some very early arrivals of summer migrants there were also some late ones. There were no great rushes of migrants in the

year, but some interesting rare visitors appeared, most of them having already been noticed in our pages. Among the interesting items in the Report not previously recorded in our pages the following may be mentioned :—

ORTOLAN BUNTING (*Emberiza hortulana*).—At Isle of May, May 13th and October 1st.

LITTLE BUNTING (*E. pusilla*).—At Isle of May, October 4th and 5th.

LAPLAND BUNTING (*Calcarius lapponicus*).—At Fair Isle, October 3rd.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—Nested in Selkirkshire, the first record for the county.

RED-BREASTED FLYCATCHER (*M. p. parva*).—One at Isle of May, October 4th.

OSPREY (*Pandion h. haliaëtus*).—One was seen "in summer" at a loch in the Cairngorms.

GADWALL (*Anas strepera*).—A pair was reported from Tentsmuir (Fife) on May 19th.

SLAVONIAN GREBE (*Podiceps auritus*).—"There is pleasing evidence of the increase" of this bird "as a nesting species."

SPOTTED REDSHANK (*Tringa erythropus*).—Three are reported as being on the shore of Loch Elrig (Wigtownshire) on September 4th.

FOOD.—A nest of a Common Buzzard in Argyllshire had sixty-four young rabbits lying at its edge. A dead weasel was found in a dovecote occupied by Barn-Owls in Renfrewshire. On the Bass Rock Herring-Gulls killed and carried off young rabbits.

LETTER.

VARIETY OF LAPWING.

To the Editors of BRITISH BIRDS.

SIRS,—A very interesting variation in the plumage of the Lapwing (*Vanellus vanellus*) came under my observation at Willington, Bedfordshire, on February 1st, 1924. It was when first seen one of a party of some fifty, and later in the day with as many more in the same field. It was so conspicuous that it appeared to be practically albino, but on taking up other points of observation the normal black markings on the head and breast came into view, and when on the wing the black tail-bar and primaries were seen to be also normal. Through binoculars at close quarters the white mantle seemed to be diffused with darker under-markings, giving in some lights more of a cream coloration. From what I afterwards gathered the bird had already been noticed for the previous three weeks, frequenting the same roadside, favourite, plover-haunt. Any variation in this species is very unusual and sufficiently worthy of record, but my object is more particularly to seek any information whether this bird has been elsewhere observed, or that any further of its movements may be notified.

J. S. ELLIOTT

DOWLES, WORCS.



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EFFECT OF WEATHER ON THE SONG IMPULSE.

BY

CHARLES E. ALFORD, M.B.O.U.

THAT the vocal-energy of song-birds, quite apart from the influence of sex, ebbs and flows with the ever-changing moods of our fickle climate, is a matter of common knowledge. There are days, even in the height of the mating season, when scarcely a note can be heard ; and there are days of incessant song. The tuneful periods we ascribe—rather loosely, I think—to favourable weather conditions, the silent to the reverse. But what do we mean by “ favourable ” ? What exactly are the conditions of weather that promote or retard the impulse to sing ? With the thermometer at freezing-point the Song-Thrush (*T. p. clarkei*) will sing for as long a period as thirty-six minutes after sunset ; yet on other occasions, with the mercury thirty degrees higher, and weather conditions apparently ideal, not a single note will be heard.

Some three years ago, during the evenings of spring and early summer, I commenced to keep a daily record of the weather, noting at the same time the precise moment when the Song-Thrush finally ceased to sing. I have kept these notes fairly regularly, and from the mass of figures resulting therefrom it is possible, I think, not only to “ measure ” the amount of vocal-energy recorded from day to day, but also to learn something of the various types of weather that controlled it.

During the last half-hour or so of daylight, whatever song-energy there may be is at its height, and the number of minutes after sundown that a bird “ keeps it going ”—this period varies greatly with different types of weather—is, in my opinion, a fairly good measure of the amount of vocal-energy stored within. This, in conjunction with a daily weather-chart, should give a “ pointer ” to the various meteorological conditions that control this energy. That, at any rate, is the principle I worked on. Let me hasten to add that it is not ideal ; but, regarded merely as an experiment, the resulting figures should at least not be without interest.

It may be argued that it is not so much the weather that is the controlling factor, but the stimulus of sex, since the song of a bird is, to a great extent, the outward expression of this emotion. But sexual activity is itself greatly influenced by the weather, and it follows, therefore, that the song, when it happens to be of sexual origin, must be equally subject to its vagaries.

My method was as follows:—Having noted the precise number of minutes after sunset when the last Thrush finally ceased to sing, I registered the amount, together with the prevailing weather conditions, on a chart which marked the hour of sunset as Zero, and the normal average cessation of song during spring and early summer (in minutes after sunset) by a thick black line similar to that on a clinical temperature chart. It being impossible to deal with individuals of different species singing at the same time, I concentrated on the Song-Thrush, as being not only the most typical, but also one of the loudest of our common song-birds, and therefore the easiest subject for accurate observations. The fact that I confined my attention to the bird that sang the latest, and ignored those that left off earlier will not, I think, impair the accuracy of such experimental observations as these. At this late hour of the day each individual is singing more or less against its rival, and after the first performer drops out of the chorus it is, as a rule, only a matter of two or three minutes before the remainder follow suit. In the flat, unwooded acres of East Anglia, where my observations were conducted, every Thrush within 500 yards is clearly audible, and I have found the above to be almost invariably the rule. Exceptionally, of course, an individual will continue to sing long after its fellows have retired; but this article is not concerned with exceptions.

My observations were conducted chiefly between February 1st and June 10th, for three years in succession, in the neighbourhood of Southwold, on the east coast. Unless otherwise stated, all weather conditions quoted in the tables are normal of their kind, such extremes as gales, thaws, thunderstorms, and temperatures below freezing-point being purposely omitted, as likely to upset the averages. The measurements are in minutes and seconds after sunset, the temperatures Fahrenheit, and the times Greenwich throughout.

TEMPERATURE.

Though temperature, from 32° upwards, is not an entirely negligible quantity, it has, by itself, less direct influence for good or bad than any other factor. According as the prevailing weather be favourable or otherwise, so does song-energy respond, to a certain extent, to the rise or fall of the thermometer; but the influence of temperature is, in any case, so imperceptible, that one or two degrees, more or less, appear to make no appreciable impression.

TABLE A.

32°—36°	..	..	..	17', 15"
37°—41°	..	..	..	23', 45"
42°—46°	..	..	..	30', 43"
47°—51°	..	..	..	33', 26"
52°—56°	..	..	..	35', 57"

It is only in what I may call "stages" of several degrees, with the gradual progress of the seasons, from winter to summer (Table A), and vice versa, that the influence of temperature slowly but surely begins to make itself felt, and even then it is entirely regulated by the type of weather prevailing at the moment. If the other conditions are normal, a rising thermometer will almost certainly show an increase in song-power; but if they are abnormal, song-energy will remain at a low ebb no matter to what height the thermometer may rise. A low temperature with normal conditions will give far better results. This is well illustrated in the following figures:—

March 10th, 1924—32°, cool E. breeze; clear, after sunny day 33'

May 25th, 1924—52°, light S.W. breeze; very overcast; torrents of rain after day of rain squalls 14'

Though the temperature on May 25th was twenty degrees higher than that on March 10th, the combined effects of rain and cloud were sufficient to reduce song-energy by no less than 19 points.

April 28th, 1923—50°, weather N.W., calm, partly cloudy 51'

June 4th, 1924—50°, gusty E. wind, overcast, raining 17'

Here we see the effects of good and bad weather, with the thermometer at the same mark on both days.

The only condition where temperature would appear to exert some direct influence is in a wind of gale force. If the reader will turn to the Gale Chart (Table B), he will see that whilst the four lowest temperatures show 0, the four higher readings show a considerable improvement, though the other conditions (with the exception of the 44° reading) are equally bad all through. This may or may not be significant, and to settle the point beyond doubt, we need, of course, a great many more than eight observations.

Readings below 32° give very poor results, not, I think, because they are below freezing-point, but mainly owing to the extreme conditions which in this country so often accompany a low temperature. When other factors—especially the

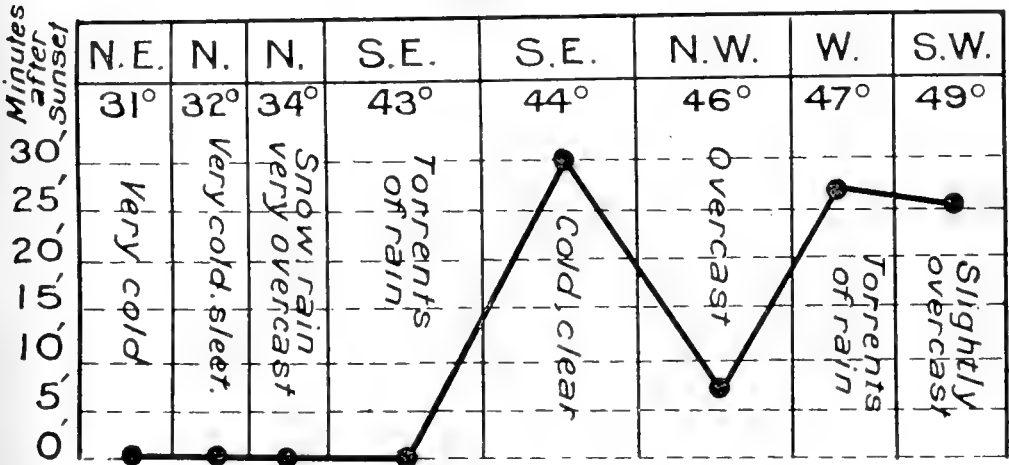
direction of the wind—are exceptionally favourable, then we find once again that the effects of temperature, even below 32°, are insignificant. The only one of my readings below freezing-point that is not songless shows the other conditions to be almost perfect:—

February 17th, 1924—31°, slight S.W. breeze;
 bright and clear 24'

Compare this with that of May 25th (above), and it will be seen how much attention our songsters pay to temperature, when other conditions are favourable. The only contradiction to this, out of the sixteen songless evenings in my notes,

GALE CHART.

Table B.



is the previous one, February 16th, with the thermometer at 31°, weather bright and clear, with a light E. breeze. I cannot explain this.

For these sixteen songless evenings the temperature averaged 34.25°.

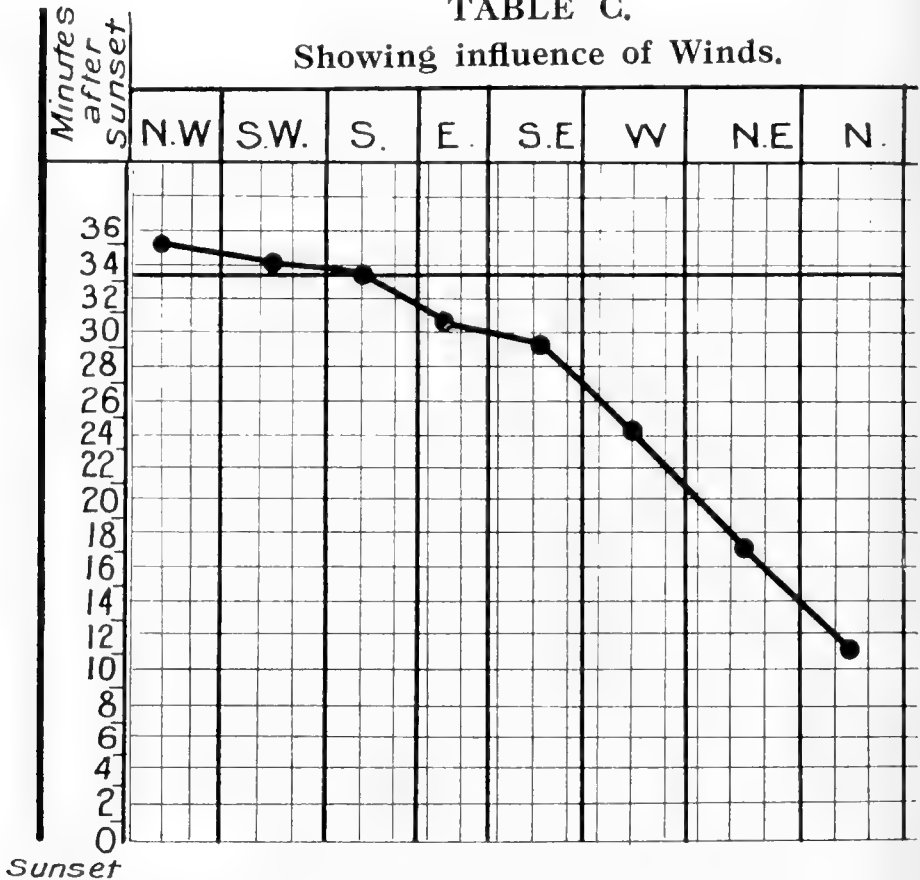
WIND.

The various types of wind (all strengths except gales), and their influence, under normal conditions, are shown fairly clearly on the accompanying chart (Table C). Assuming 33' to be the average song-value for normal weather during spring and early summer—it is actually 33' 9"—it will be seen that whilst three winds, the N.W., S.W., and S., are slightly favourable, the remainder show an absolute collapse, culminating in the N. wind, which pushes vocal-energy very nearly down to Zero. It would appear, therefore, that wind

is not on the whole a favourable factor, and that as it gains in strength song-energy steadily declines. This is well illustrated in the following table of wind-force (all winds) :—

Calm	..	..	34', 30"
Light	..	..	29', 57"
Strong	..	..	25', 32"
Gales	..	..	10', 45"

TABLE C.
Showing influence of Winds.



On the sixteen songless evenings referred to under "Temperature," the winds were as follows :—six from the N. (two of gale force) ; from the N.E., three ; E., two ; N.W., two (one nearly calm, but 2 ins. snow on ground) ; and W., S.W., and S.E., one each.

Though even gales show a slightly better average than the N. wind—10', 45" as against 10', 40"—this is accounted for by the fact that many winds of gale force blow from quite a mild quarter, and in this particular case, as explained above, the influence of temperature may help to level things up. Even so, the author of the first bird-book who omits to tell his

readers how the Mistle-Thrush (*T. v. visciivorus*) revels in a gale, should receive at least a gold medal. Most of our common song-birds will at times sing in a gale, and it is my experience that one may hear the Song-Thrush and Robin sing under these conditions far more often than the Mistle-Thrush. In any case those individuals we hear are exceptions ; it does not alter the fact that birds do not, as a rule, like a gale, and that it is the most unfavourable of all conditions.

ATMOSPHERE.

A clear or hazy sky, as will be seen in the following table, is the most favourable single factor of all :—

Clear or hazy	..	..	37', 20"
Calm	..	..	34', 30"
Rain	..	..	26', 54"
Cloud	..	..	26', 43"
Clear or hazy and calm	..	..	42', 30"
"	"	" wind	35', 12" (all winds)
Calm	"	" rain	30', 40"
"	"	" cloud	30', 02"
Rain	"	" wind	24', 30"
Cloud	"	"	23', 40"

No matter how unfavourable the other conditions (excluding extremes) may be, a clear sky invariably gives a reading above normal ; even in the one gale in which we find a clear sky, it is only three points short of the average.

The next most favourable factor is a calm atmosphere, and this, in conjunction with a clear sky, gives the highest average reading of all—42', 30".

Cloud and rain, in conjunction with calm conditions, show a figure only slightly below normal ; when accompanied by wind, however, they are both great depressants.

I have only two records of thunderstorms. During a storm on May 2nd, 1924, with the thermometer at 47°, there was not a single Song-Thrush to be heard, though the Robin and Nightingale (*L. m. megarhyncha*) were singing as usual. On May 18th, however, with a temperature of 51°, the Thrush was singing continuously during an exceptionally heavy storm, and through the most vivid lighting flashes, but finally ceased sixteen minutes after sunset.

SUMMARY.

Temperature has less direct influence on vocal-energy than any other factor. Its effects can be interpreted only in a general sense, and from a seasonal point of view. As the

thermometer slowly rises with the advancing year, so will the singing impulse show a corresponding rise, whilst the other conditions remain seasonable ; but let the weather play tricks, and down will go song-power, though the mercury may be at eighty. In other words, the influence of temperature is only secondary to such factors as the force and direction of the wind, and the state of the atmosphere.

My highest individual reading is 51', and this has been reached on only three occasions :—

May 26th, 1922—Clear, calm, temp. 65°.

April 28th, 1923—Calm, light clouds, temp. 50°.

May 5th, 1924—N.W. breeze, some driving clouds, temp. 44°.

Whilst the temperature covers the wide range of 21°, the weather was, in all three cases, mainly calm, with a clear to only slightly cloudy sky.

A high temperature is more favourable with cloudy conditions than with clear, with winds than with calm.

Cloud and rain, with calm conditions, have but little influence one way or another. During a quiet, steady drizzle, most species will sing much as usual ; but add to this a moderate or strong wind, and they are mostly silent.

A rising or falling barometer has little or no effect on vocal energy. Other conditions being normal, birds will sing as usual either immediately before or after a storm.

The most favourable influence of all is a clear sky with a still atmosphere, irrespective of temperature.

The most unfavourable influence is a gale, but only when accompanied by a low temperature. As explained elsewhere, the influence of temperature is more marked in winds of gale force than in any other condition.

In conclusion, it is hardly necessary to add that the observations recorded in this article are purely experimental, and that if the problem we have been discussing should ever be finally solved, it will not be by the methods employed above. But that is not to say my figures are of no scientific value. Covering, as they do, a period of three years, under all sorts and conditions of weather, they may well be of use to those who investigate the subject more fully, and—let me add—more scientifically.

COURTING DISPLAY OF THE RED-BREASTED MERGANSER ON SALT WATER.

BY

H. R. COLMAN AND HENRY BOASE.

DURING the first months of the year, in January and February occasionally, in March and April freely, the Red-breasted Merganser (*Mergus serrator*) makes its courting display on the Tay Estuary. When the sun shines pale through light haze, and the flood tide lingers at the turn, the Merganser finds time, even in the early days of January, to pay court to the females in the party. At that time of year there is almost invariably a considerable preponderance of males, generally at least two-thirds so far as the binocular can show, in contrast with the later days of April and May, when females (and doubtless immature males scarcely separable in the field) are usually in the majority.

The form of the display has varied comparatively little. On March 16th, 1919, a group of birds were in very active display. Five females were present in a total of eighteen birds and these found the attentions of the males so pressing that they endeavoured to escape by diving. The reappearance of the female was the signal for one or more males to "skate" towards her. The "skating" on the surface when in haste seems to be carried out in two forms: one with neck retracted and crests bristling, the bill rather upward inclined; the other with head and neck outstretched in line almost touching the surface, an attitude perhaps more of menace to the other males, however. In both cases the wings are slightly raised, giving a more rounded appearance to the back. In the particular instance, the first attitude was used in approaching the female, the birds driving themselves along on the surface with strong thrusts of the feet, leaving a heavy wake. On nearing the female the males drop suddenly to the normal floating attitude, jerk the head and neck upwards in line at a steep angle with the head feathers depressed, followed almost instantly by a simultaneous upthrow of the rear portion of the body, spreading of the closed wings outwards, the resumption of the normal attitude of the head, the raising of the head feathers, and, in some cases at least, the wide opening of the bill—the whole performance occupying perhaps a couple of seconds from the first stretching of the neck to the resumption of the normal swimming attitude. The display may be made once only, or may be repeated a

second time in quick succession. The opening of the bill seems a variable feature of the performance; the mandibles may be opened until almost at right angles, showing the interior of the mouth, or this feature may be varied in all stages. Once or twice the females gave a display—a mere raising of head and neck in line.

A display watched on April 14th, 1924, differed in some details. Only certain females were approached by the males and only certain males made display, the others taking little notice. The males showing any excitement were generally swimming with the neck retracted with bill upward inclined and the crests bristling. These awaited their opportunity it seemed, so that the display, which followed the lines already described, should be made as the bird came over the crest of the swell and the female below in the trough. On this occasion no bird was seen to open the bill to its limit; for the most part the males contented themselves with an opening of an inch or so, while others omitted this part of the ritual. Once or twice another phase was introduced at the start, where the male stretched the neck upwards, with bill pressed close to it, before extending the head in line with the neck.

Still another variation in form of display was seen on January 11th, 1925. In this instance the group of birds consisted of two males and four females or immature birds, and of these only one male and one female took any real part in the display. The ardent male swam in pursuit of the female with neck retracted and head feathers bristling, the other male following, and endeavoured by rapid swimming and sometimes "skating" on the surface to attain a favourable position in advance of the female as she breasted the tide. At the suitable moment the male jerked head and neck upwards in line at a steep angle with head feathers depressed, paused so for an instant, retracted neck sharply with head still held in line, at same time swinging forward on the base of the neck as the rear portion of the body swung upwards and the wings were raised from the sides. It appeared that the instant when the swing-up was at its maximum, the head and neck rebounded as it were to a position of moderate extension of neck, and the head was returned to a normal position and the neck was again retracted to the ordinary swimming attitude as the bird resumed its normal trim. Whether the bill was opened as in previous instances could not be determined owing to the long range and broken background of the swell. The female sometimes made reply in the manner already noticed and appeared to swing round in order to face the

male as she did so, as he lost position in the tide race while displaying. The second male did not court the female, but his attention, such as it was, was sufficient to cause the other male to lose no time in pursuit when he got left behind.

Display seen on other occasions showed some additional variation of form. Some of these appeared to arise from a dullness or want of enthusiasm on the part of the males; for instance, the head and neck were stretched upwards in line without the following upward swing of the rear of the body; no doubt the differences in the opening of the bill arise similarly. In some cases it appeared that the extended neck was swung backwards to meet the swing of the body, though in no case did this reach the development seen in the case of Golden-eye. The form of approach was changed at times from that already described to an attitude of stiff attention with neck extended erect and the head held normally with the crests bristling.

The behaviour of the females showed little of note, but the display, where observed, was not necessarily on the part of birds addressed most assiduously by the males. One female, resting apart at some little distance, displayed frequently without drawing the attention of any male. In field observation the matter is complicated by the uncertainty of distinguishing sex with accuracy; in one instance an individual showing slight but conclusive indication in its plumage of being a male displayed freely with all the verve of its adult companions. Had the distance been greater, however, it would have been a matter of difficulty to determine the sex of the performer.

It is perhaps worth while noting the ultimate dispersal of a group which had been in active display. The party consisted in the first instance of four males and three females, to which came another two males. After a period of display, during which one female was the centre of attraction, one female seemed passive, and the third kept apart and at times displayed without attracting attention, one male and the attractive female swam away together in a definite manner, one male had retired alone, three males continued to swim in company with the passive female, while the remaining male and the lonely female paddled about apart, seemingly at a loss what to do.

Two additional matters of behaviour, not so obviously connected with display yet associated with it, have been noticed. The one is in the finish of the rush made at or after the female described as "skating," which may precede

display or follows it. In the latter case the rush ended in the bird rising on the water and beating its wings, certainly a common enough behaviour on the part of duck, yet in the circumstances a fitting action for the male, having drawn attention to itself by its wild rush, to exhibit the striking wing pattern. The other incident is more obscure in meaning. The males, having made display, turned the head over the back as when resting, tilted over the body to one side, and waved the exposed foot for some minutes. The attitude assumed is more commonly associated with preening, but in the present instance no action of the kind was visible. Perhaps it was playfulness, just as Mallard, Teal and Shoveler seem to find delight in somewhat like circumstances in plunging here and there in the water, jumping into the air for a single wing beat and diving, all from sheer good spirits.

These displays have been watched in most cases quite close inshore, just outside the break of the swell in fact, and generally out of the main current, or, as mentioned already, during slack water.

NOTES

LESSER SPOTTED WOODPECKER AND WRYNECK NESTING IN THE SAME TREE.

TOWARDS the middle of May, 1924, I watched a Lesser Spotted Woodpecker (*Dryobates minor comminutus*) excavating a nesting-hole in an old apple-tree at Fishbourne, near Chichester. The hole faced north and was about five feet from the ground; three feet lower down in the same tree and facing eastwards a Wryneck (*Jynx t. torquilla*) was also busily engaged in enlarging a natural cavity. The latter bird carried the excavated chips over a low hedge and dropped them a few yards away. Most of the work was carried out between 10 a.m. and noon by both birds, neither of whom seemed to take the least notice of the other. The Woodpecker commenced laying on May 27th, the clutch of five eggs being completed on the 31st. On June 2nd the eggs were taken. The Wryneck deposited her first egg on June 1st, and the sixth and last on the 6th. The first young hatched on June 21st—period fourteen (or fifteen?) days. Three eggs proved to be infertile.

RAYMOND CARLYON-BRITTON.

BEWICK'S SWANS IN DERBYSHIRE.

ON March 4th, 1925, I saw four Bewick's Swans (*Cygnus b. bewickii*) on Coombs Reservoir, a large sheet of water some four miles N.N.W. of Buxton. Two were immature as shown by the light smoky-grey of the necks and, to a lesser extent, the bodies. On the 5th there were seventeen, among which the two young birds could be distinguished, all the rest being adults. While I was there they all got up and rising to a great height flew rapidly away west, though in two parties, one of thirteen and the other of the four birds I had seen the day before. At the time I saw the birds there was a northerly gale blowing; for a week or more previously the weather had been easterly, going round to the west on the night of the 3rd-4th, backing to the north later in the day.

WILLIAM SHIPTON.

SMEW IN WARWICKSHIRE.

ON January 20th, 1925, I saw an adult male Smew (*Mergus albellus*) on one of the Sutton Park pools. It flew away about mid-day, but I saw one again at the same place on February 13th, 14th and 15th, and a friend told me that he saw one on February 20th.

B. A. CARTER.

WOOD-PIGEON GORGED WITH POTATOES.

ON February 7th, 1925, I shot a Wood-Pigeon (*Columba p. palumbus*) near Methven, Perthshire, whose crop contained twenty potatoes, of which half a dozen were the size of walnuts, and could be forced into the Pigeon's mouth only with considerable difficulty. The crop was completely distended. None of the potatoes showed any sign of decay, although three other Pigeons shot the same day had been feeding on quite rotten potatoes. SCONE.

[A somewhat similar case was reported in *Brit. Birds*, Vol. XII., p. 268.—EDS.]

OYSTER-CATCHER BREEDING IN WEST SUSSEX.

ON June 28th, 1923, I found a nest of an Oyster-Catcher (*Hæmatopus o. ostralegus*) on a shingle bank in the south-western corner of Sussex. On the previous day I had noted the birds in the locality and now watched the hen, escorted by the cock most of the way, to the nest. This contained the normal three eggs, which were chipping.

RAYMOND CARLYON-BRITTON.

EARLY NESTING OF STARLINGS IN WESTMORLAND.—Mr. A. Astley writes that a pair of *Sturnus v. vulgaris* were feeding young in a nest at Rydal, on March 8th, 1925, and on the same day a nestling was found dead in another place a mile or two away.

EARLY NESTING OF HOUSE-SPARROW IN LANCASHIRE.—With reference to Mr. Alford's note (*antea*, p. 266), Mr. G. N. Carter writes that a nest of *Passer d. domesticus* containing three eggs was taken from the ivy on a house at Worsley, on December 19th, 1924. The bird flew off the nest and the eggs were warm.

ROUGH-LEGGED BUZZARD IN NORFOLK.—Mr. R. G. Willan informs us that an adult *Buteo lagopus* frequented an estate near Holt from February 21st to 23rd, 1925, and was often seen being mobbed by Hooded Crows and other birds.

GLOSSY IBIS IN CORK.—With reference to the note under this head on page 116 of this volume, Mr. G. R. Humphreys informs us that the bird referred to is the same as that reported by him on page 280 of Vol. XVII., and the date he gave is the correct one.

GLAUCOUS GULL IN NORTH DEVON.—Brigadier-General H. R. Kelham writes that on January 30th, 1925, during a heavy northerly gale, he saw a Glaucous Gull (*Larus hyperboreus*) on the foreshore by the estuary of the Taw and Torridge. The bird appeared as large as some Great Black-backed Gulls near it and was entirely white of a soft dull shade. The bird was eating a dead Guillemot. The Glaucous Gull is an uncommon visitor to south-west England.

LETTERS.

THE SMALLEST BOOK ON ORNITHOLOGY.

To the Editors of BRITISH BIRDS.

SIRS,—Since I wrote about the above (Vol. XVIII., pp. 258-9), Mr. D. J. Balfour Kirke (Greenmount, Burntisland) has very kindly sent for my inspection what is another and later edition of the book I have already described as published in 1810.

The sixth line of the title-page of Mr. Kirke's book is printed in different type to that used in the 1810 edition and after the words *Gracechurch-street* there is added *And J. Harris, St. Paul's Church-Yard*, and also the date 1816 (which it will be noticed is that of the French publication to which I have already drawn attention). A plate of the *Eagle* faces the title-page and the first eight pages of letterpress are differently spaced. Thereafter the two editions are similar, but on the last page (p. 96) of the 1810 edition appear the words:—*London: Printed by Darton, Harvey & Co., Gracechurch Street*, whereas in the 1816 edition these words are altered to:—*Printed by Darton, Harvey & Co., Gracechurch Street, London*. The plates in the 1816 edition show signs of wear, and the chief charm of Mr. Kirke's book is that it is in the original pink cardboard covers and that it is uncut: measuring 2.45 by 2.25 inches. The front cover is entitled as on the title-page except that no place of publication, printer's name or date is given, but the words *Price 1s. 6d. or 2s. in leather* are added; the whole title being encased in an ornamental frame. The back cover advertises six other publications by *Messrs. Darton, Harvey and Darton, 55, Gracechurch-Street*, none of which, however, deal with ornithology, though, it may be noted that a *Natural History of 48 Quadrupeds* is included. I have been informed that Mr. F. H. Barclay (The Warren, Cromer) has a copy of this edition bound "in the original green calf," but I have not had the opportunity of collating it.

It is certainly a strange coincidence that the plate of the *Eagle*, which is given in the 1816 edition, should be omitted from the edition of 1810 and the French publication of 1816; I have handled a copy of each of these and it is possible that both these copies are incomplete in this respect.

It may be of interest to add that Alfred Mills, who was the draughtsman responsible for the plates in these books, was for about forty years a skilful designer of illustrations for small books for juvenile instruction. He died at Walworth, aged fifty-seven, in 1833 and left a wife and six children.

HUGH S. GLADSTONE.

THE WINTER STATUS OF THE WHIMBREL.

To the Editors of BRITISH BIRDS.

SIRS.—In his note on the Whimbrel (*antea*, p. 269), Mr. H. W. Robinson makes the following statement: "Although Whimbrel in winter are uncommon, their occurrence is hardly worth notifying." As this connotes a winter status for this species very different to that gained from my own work in the field, and I may remark that for over five years I have been devoting special attention to the coast of Essex and have yet to record my first winter Whimbrel, I have referred to all the works on my bookshelf which have bearing on the subject. The following books treat the Whimbrel as a spring and autumn passage migrant, and the authors do not appear to have had any knowledge of winter records in their counties: Mansel-Pleydell's *Birds of Dorsetshire*, Pidsley's *Birds of Devonshire*, Babington's *Birds of Suffolk*, Christy's *Birds of Essex*, Smith's *Birds of Somersetshire*, Mathew's *Birds of Pembrokeshire*, etc., Gladstone's *Birds of Dumfriesshire*, Bolam's *Birds of Northumberland and Eastern Borders*, Macpherson and Duckworth's *Birds of Cumberland*, *The Birds of Glamorgan*, Harting's *Rodd's Birds of Cornwall*, Borrer's *Birds of Sussex* and Stevenson's *Birds of Norfolk*. Nelson (*Birds of Yorkshire*, p. 647) states: "I am not aware of any instance of the Whimbrel remaining on the Yorkshire coast during the winter." Coward and Oldham (*Birds of Cheshire*) were unable to quote more than one winter occurrence of the Whimbrel. Coward (*Birds of the British Isles*, etc., p. 177) says: "I have only once met with the Whimbrel in winter." *A Practical Handbook*, p. 667, states "exceptionally winter." Reference to such authorities as Macgillivray and Saunders confirms the foregoing evidence.

From the works available to me I now quote those which might be considered possibly to support Mr. Robinson's view. The status given by Hancock (*Birds of Northumberland*, p. 101): "An autumn or winter visitant, arriving in August and September and departing in spring," is self dismissed. Saunders (*Mitchell's Birds of Lancashire*, p. 237) states: "and occasionally a few birds may remain the winter; but at both seasons the species is rare and it is during the vernal migration only that it becomes common." Balston, Shepherd and Bartlett (*Notes on the Birds of Kent*, p. 417) state: "Mr. W. H. Power, writing in 1865, says—'A few, however, generally remain during the winter,'" and it may be this statement that Dr. Ticehurst has in view when he says (*A History of the Birds of Kent*, p. 487): "though a few are said to remain the winter." Kelsall and Munn (*Birds of Hampshire*, p. 322) state: "Wise remarks that they have been met with in winter." Seebohm (*British Birds*, Vol. 3, p. 100) says "a few remain on the low-lying coasts all the winter," and Bowdler Sharpe (*British Birds*, Vol. 3, p. 323) states "a certain number remain during the winter especially on the west coast of Ireland."

It will be seen that the only statements which might possibly give colour to Mr. Robinson's view are of a general character and not supported by evidence. The foregoing references suggest that before we can conclude that the winter Whimbrel "is hardly worth notifying" we must have the necessary evidence.

WILLIAM E. GLEGG.

[Winter occurrences of late years have only been recorded for Scotland; *vide* Vol. V., p. 370; VII., p. 350; IX., pp. 76, 160; X., p. 172.—EDS.]

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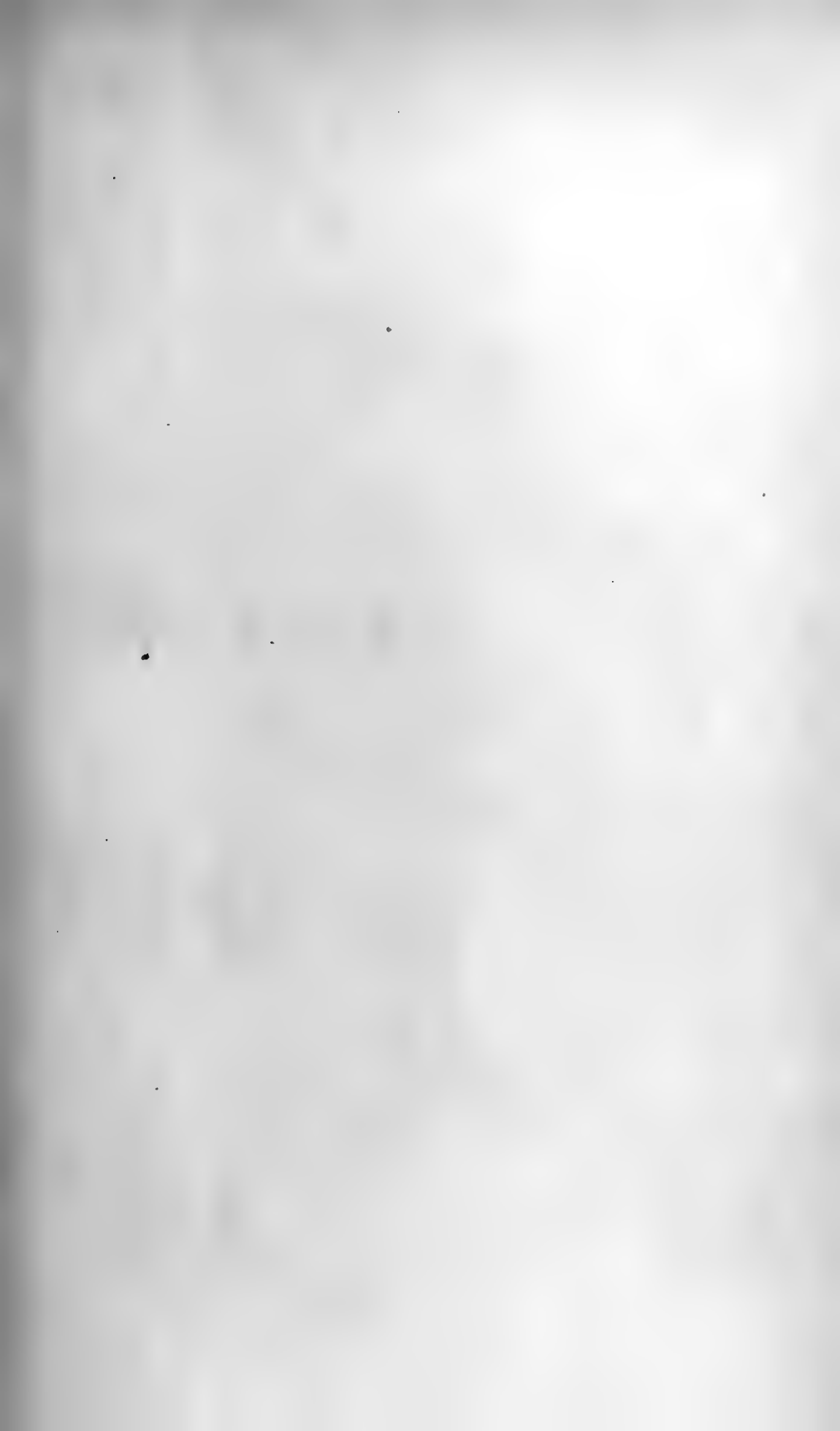
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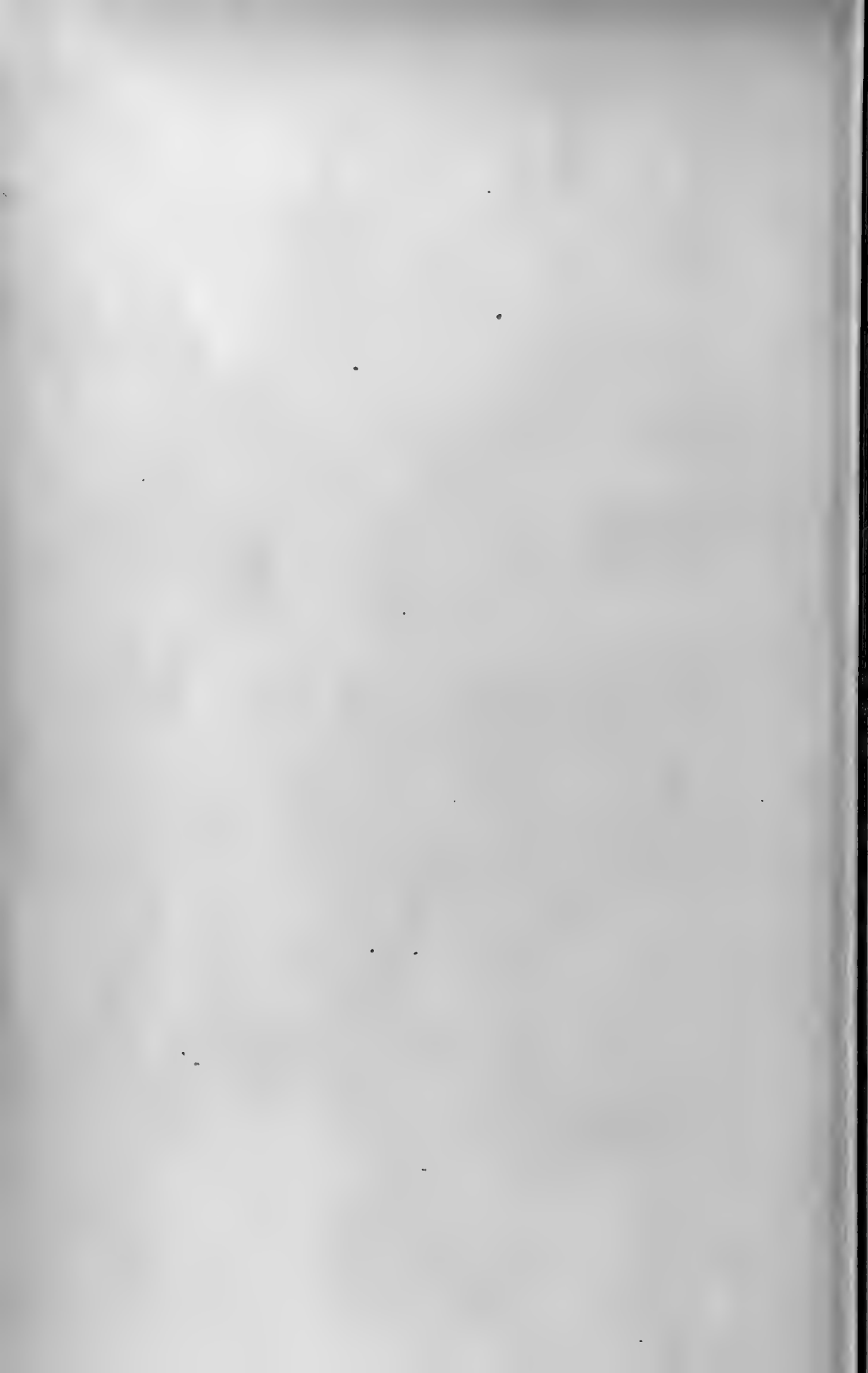
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