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# BRITISH BIRDS

AN ILLUSTRATED MAGAZINE DEVOTED  
TO THE BIRDS ON THE BRITISH LIST

EDITED BY

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

ASSISTED BY

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JUNE 1909—MAY 1910



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## PREFACE.

THE ornithological event which has excited the most interest among our readers during the year covered by this volume has been, without doubt, the remarkable irruption of Crossbills. The widespread character of the incursion, the large number of birds taking part in it, and the considerable number of breeding records resulting therefrom are unparalleled in the history of previous irruptions. We take the opportunity of thanking all those correspondents who have helped in making the record of this interesting movement, so far as the British Isles are concerned, as complete as possible.

The "BRITISH BIRDS Marking Scheme," inaugurated in the first number of this volume, has made a successful start. The number of birds ringed during the first year has been highly satisfactory, although we hope that in the future many more of our readers will co-operate both in the actual ringing and in making the scheme as widely known as possible. Although the percentage of "recoveries" is at present small, we have little doubt that it will grow rapidly, and that the results of the scheme will eventually attain very considerable importance. It is as yet impossible to measure the knowledge achievable by this means, but there is every indication that facts of the utmost interest and importance will be brought to light by the ringing of birds, and this being so, we feel sure that the scheme will continue to receive the active and increasing support of our readers.

The subjects of Migration and Plumages have received considerable attention in this volume, and we hope that at some future date Professor Newton's reproach

that ornithologists have neglected to study sequences of plumages may be removed so far as British birds are concerned.

In recording our special thanks to Miss E. L. Turner for the very interesting series of photographs of the Water-Rail, we would remind our photographer-correspondents that we are always glad to consider contributions illustrated by photographs which aid in the demonstration of particular points in the habits of birds. We are very glad to note a growing tendency to photograph with this object in view rather than for the sake of mere portraiture.

Perhaps the most satisfactory feature of the volume now completed has been the growth in the number and importance of the "Notes" which have been contributed by so many correspondents from all over the kingdom. The varied character of these notes has added greatly to their interest, and hardly any branch of our subject seems to have been neglected.

The loss of Dr. R. Bowdler Sharpe and Mr. Thomas Southwell from the ranks of British ornithologists will be long and keenly felt. Dr. Sharpe was from the first greatly interested in this Magazine, and his kindly encouragement and active support in making it known amongst the host of his ornithological friends places us all under a great debt of gratitude.

THE EDITORS.

April 30th, 1910.

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# BRITISH BIRDS

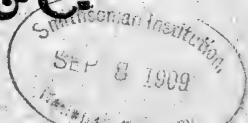
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THE BRITISH LIST

JUNE 1,  
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Vol. III.  
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WOOD-LARK AT THE NEST.

(Photographed by F. Barber-Starkey in North Devon.)

# BRITISH BIRDS

EDITED BY H. F. WITHERBY, F.Z.S., M.B.O.U.

ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., W. P. PYCRAFT, A.L.S.,  
M.B.O.U., AND NORMAN F. TICEHURST, M.A., F.R.C.S., M.B.O.U.

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## EDITORIAL.

It is with great satisfaction that I am able to announce that, commencing with this number of the Magazine, I shall have the assistance not only of Mr. W. P. Pycraft, who has given me most able help in the past, but also of two such excellent ornithologists as the Rev. F. C. R. Jourdain and Mr. N. F. Ticehurst—both already well-known to the readers of BRITISH BIRDS.

H. F. W.

In the volume which commences with this number, we hope to devote special attention to the migration of birds. The opening article, by Dr. J. A. Allen, will, we feel sure, be greatly appreciated by our readers, since

it may be regarded as a summary of the views held on the general aspects of the subject by one of the best-known and most respected of our American *confrères*—views which are, we believe, in harmony with those held in general by American ornithologists. In a future number will commence a series of articles by Commander H. Lynes on some aspects of the migration of birds in the Mediterranean. Commander Lynes has made excellent use of exceptional opportunities for the study of migration during three years in this region, and his observations on the direction, manner, speed, and altitude of the flight and on the habits of migrating birds are most valuable.

The device of marking birds, as an aid to the study of migration, is an excellent one, and promises to yield a rich harvest of facts—if properly carried out. We venture to express a hope therefore that the BRITISH BIRDS marking scheme, described in this number, will receive the hearty approval and co-operation of our readers. In organizing this scheme we have been fortunate in securing the aid of Dr. C. B. Ticehurst, whose experience in this work is considerable. At present our continental brethren are ahead of us in this field, but we hope that British ornithologists will not long remain laggards in this matter.

In yet another direction we desire to obtain the help of our readers. We are anxious to begin a systematic inquiry into the exact distribution throughout our islands of certain species whose range at the present time is but imperfectly known. The Nightingale may serve as a case in point, and two of us—Jourdain and Ticehurst—have undertaken to collect information with a view to defining its range so far as at present known. Their work will, we trust, be supplemented by the observations of our readers, and we beg that, to this end, they will take careful notes as to the status of this bird in their several districts.

As has been pointed out by a number of eminent

ornithologists during recent years, there is but little known as to the sequences of plumage which take place from the nestling to maturity, and from season to season, in relation to our native birds. This is a subject to which several ornithologists have been devoting special attention for some years, but owing to the difficulty of examining material sufficiently complete to show the cycle of the plumage of any one species, progress has been slow. It is now thought, however, that a sufficient number of species has been worked out to allow of a start being made, and contributions on the subject will be provided by Messrs. J. L. Bonhote, M. J. Nicoll, W. P. Pycraft, C. B. Ticehurst, and H. F. Witherby.

Beyond the special features above mentioned, we hope to publish many interesting contributions, and we feel sure that the "Notes" section will continue to form a valuable and interesting feature of the Magazine.

THE EDITORS.

## MARKING BIRDS.

## THE "BRITISH BIRDS" SCHEME.

REFERENCES to the plan of marking birds have been made from time to time in previous numbers of this Magazine, and the subject will be familiar to our readers.

The results achieved by Herr C. Mortensen in Denmark and by the officials of the Rossitten Bird Observatory in Germany (*cf.* Vol. II., p. 362) prove that the plan is well worthy of a thorough and exhaustive trial.

If sufficient results were obtained much could be learned from marked birds. We should gain a more exact idea of the movements of individual birds than has ever been possible by any other method, and this should not only throw light upon the more general aspects of migration, but it should tell us a great deal that is at present obscure with regard to particular points. For example, while we may know the general distribution of a species in winter and summer, we do not know the extent of the migration of individuals; or, indeed, whether in such cases as the Song-Thrush and Robin, certain individuals migrate at all. The movements of sea-birds are very little understood, and much might be learned from marking a large number. This plan might also tell us what influence age has upon plumage, etc.; where a young bird, whose birthplace is known, breeds; whether individuals return to previous nesting haunts, and whether pairs come together again in successive breeding seasons.

Such are a few of the possibilities of a thorough system of marking birds, but in order to obtain results of real scientific importance there are two essentials. Firstly, to mark a large number of birds with such care that the facts with regard to the identity of the birds, the numbers on the rings and the dates and localities are indisputable; and, secondly, to recover such a proportion of the marked

birds that the results obtained may be sufficient to make them really valuable.

To this end we have had prepared a number of rings, of which we will send a supply, with a schedule of observations to be filled in, and full directions to any reader of the Magazine who will undertake to mark birds. It is above all necessary that those who undertake to help shall also undertake to use every care to fill in the schedule methodically and accurately, and to observe the directions given, otherwise endless confusion will be caused, and the objects desired will be defeated. For this reason a copy of the schedule and directions has been here printed, so that those who are willing to help will see before applying for rings exactly what they will be asked to do.

It may here be mentioned that the rings are very simple and easily adjustable, and do not, so far as observations go, in the least injure or impede the birds.

Equally important to marking the birds is their recovery. Every ring therefore will be marked in full—"Witherby, High Holborn, London." Rings which are insufficiently marked, or marked with an abbreviated address, seem to us to be useless, and the results obtained from birds so ringed may even be misleading. London, being more universally known than any other place-name, seems a great advantage, in that any finder of a ring so marked should realise that communication with the "ringer" is intended. Moreover, it is our intention to seek the co-operation of the Press, not only of this country, but of the Continent, in making it known that birds are being so marked, and for what purpose.

Dr. C. B. Ticehurst, who takes a great interest in this subject, and has himself had experience in marking birds for the last two years, has very kindly given us much advice, and has offered his help in keeping records and working out the results of the scheme. Progress will be reported from time to time in these pages, and we hope that many of our readers will take up the work. All

communications on the subject should be addressed to the Editors of BRITISH BIRDS, 326, High Holborn, London, and marked in the corner "M."

H. F. W.

### SCHEDULE.

NO. OF RING.	DATE.	NAME OF BIRD.	PLACE. (State County.)	REMARKS. (State Sex, if you are certain of it and whether nestling or adult; if several birds of one brood, colony or flock have been marked, indicate which they are.)

### INSTRUCTIONS FOR MARKING BIRDS.

1. It is most important to note down the number of the ring and the species of bird immediately you have marked it, and to enter up the Schedule without delay. The number of any ring lost or broken must be noted.
2. Any birds that can be caught should be marked, but the easiest to obtain are nestlings just before they fly.
3. Do not mark any bird unless you are quite certain of the species.
4. Do not mark any injured bird, nor any bird which has been in captivity.
5. The rings are made in three sizes:—the largest size is suitable for Peewits, Gulls, Rooks, etc.; the medium size for Starlings, Thrushes, Snipe, etc.; the smallest size for Warblers, Tits, etc.
6. To fix the ring:—Hold the bird with its back upwards and its legs away from you in one hand, and with the forefinger and thumb of the same hand hold one of the legs at the ankle joint (sometimes called the knee). With the other hand slip the ring on to the tarsus, just above the foot, and, with the finger and thumb or a pair of pliers, press the ends of the ring together so that they just meet. See that the ring cannot slip off the foot before you release the bird.
7. Schedules, when complete (*i.e.*, when 20 birds have been marked) or when partly filled if no more birds are likely to be marked for some time, should be sent immediately to the Editors of BRITISH BIRDS, 326, High Holborn, London. Requests for additional rings (the sizes wanted should be stated) and schedules should be addressed the same, and it is requested that all communications be marked "M" upon the envelope.
8. Full particulars should be sent in of all marked birds recovered, even if they are recovered in the district in which they were marked.
9. If a ring is recovered it must not be used a second time or confusion will arise.



SOME NESTING HABITS OF THE WOOD-LARK  
AS OBSERVED IN NORTH DEVON.

BY  
F. BARBER-STARKEY.

(PLATE I.)

ON May 1st, 1908, Captain R. D. Fanshawe, with whom I was staying in North Devon, about eleven miles from the outskirts of Exmoor, informed me that nearly three weeks before he had found a nest containing almost full-fledged young, which he took to be those of a Lark. The extreme earliness of the nest aroused my suspicion, so, on the following day, I asked Captain Fanshawe to take me to the place. As we were searching for the nest, an exclamation from my companion hurried me to his side, where I was delighted to see a Wood-Lark's (*Alda arborea*) nest with four eggs. The nest was made entirely of moss and dried grass, it had no lining, and was placed in a small natural hollow under a tuft of dead bracken. We afterwards found an old nest about fifteen yards away, and this was in all probability the first nest of the same pair of birds, the one containing feathered young which Captain Fanshawe had found three weeks before.

Both nests were situated in a narrow grass field dotted with small patches of bracken and sloping down to a steep bank covered with briars and bracken, with a few oak and ash trees at scattered intervals. On the opposite side of the valley was a large oak coppice, joining some rough ground golden with furze bushes. I may note here that nests of this species which I have found in Norfolk have been situated in short grass with very little covering over them, and in every case there has been a belt of Scotch firs at about fifty yards distance. This day we saw nothing of the birds.

The next day I took out my camera with the intention of photographing the nest and eggs. Approaching the

nest cautiously I found the hen bird sitting on her eggs, so I set up the camera at about four yards distance and succeeded in making a couple of exposures. This photograph (Fig. 1) shows well the extraordinary protective colouring of the bird amidst her natural surroundings. On my attempting to move the camera a little closer, the bird left her eggs and flew with an undulating flight across the valley. Having exposed some plates on the nest and eggs (Fig. 2), I decided to attempt nothing more till the young were hatched.

A fortnight later I determined to try my luck with the old birds. As we drew near both birds were seen to walk slowly away from the nest, for about fifteen yards, when they rose together and flew off across the valley.

I set up my camera about five feet from the nest, and seating myself below the tripod, was covered up with a green cloth by my companion, who then walked away. In about half-an-hour one of the birds appeared with its bill full of grubs, and uttering all the while a plaintive note it walked very slowly all round my hiding-place, and made a careful scrutiny of the strange object which had so rudely disturbed its privacy.

Just as the bird was gaining confidence and seemed to be on the point of approaching the nest, a flock of sheep came through the fence from the neighbouring field and catching my wind came sniffing right up to me; I was afraid they would trample on the nest, so was obliged to jump up and show myself. Owing to a high wind which was blowing the green cloth occupied much of my attention, and I determined to build a more substantial hiding-place; accordingly we approached the farmer who owned the land, and he most courteously offered to remove all his sheep from the field and even gave us a hand in erecting a hut, which we had no difficulty in doing, owing to the proximity of the beech fence, which was in full foliage.

The next morning I took up my position full of hope and waited. In less than ten minutes both birds appeared with their bills full of small grubs, and after a good look

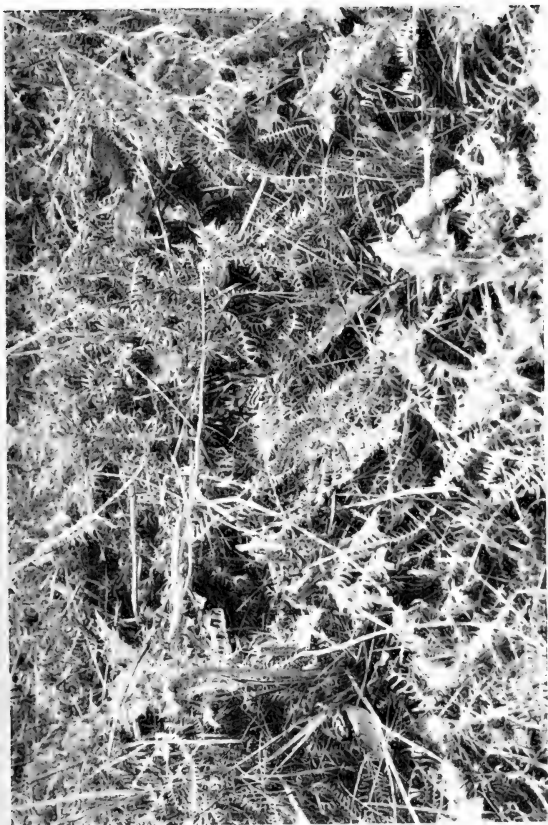


FIG. 1.—WOOD-LARK ON THE NEST.

(Photographed by F. Barber-Starkey.)



FIG. 2.—NEST AND EGGS OF THE WOOD-LARK,

(Photographed by F. Barber-Starkey.)

at the lens, one of them approached and commenced to feed the young, the other keeping at a respectful distance. At the noise of the shutter, the bird that was feeding the young flew straight up into the air about three feet and settled again within a couple of yards of the nest; I remained motionless and very soon she came back, and after cleaning out the nest flew away, the other bird following.

I now changed my plate, and after about five minutes the hen bird was back again (Plate I.); her mate returned with her, but although on this occasion and several times afterwards, I did not release the shutter in the hope that he, too, would come to the nest, he never dared to face the lens, but stood at about five yards distance, with his bill full of grubs, and there he remained until his mate had fed the young, when he flew away with her.

I have presumed that this shy bird was the male, but as the two birds seemed exactly to resemble one another I could not be sure.

## AN AMERICAN'S VIEWS OF BIRD MIGRATION.\*

BY

J. A. ALLEN.

SOME birds are resident the whole year throughout the areas they inhabit, while others move more or less northward or southward with the change of the seasons, while still others roam practically from pole to pole. The extent of the seasonal movement varies in different species mainly in accordance with the nature of their food, and is also more or less correlated with their powers of flight, the greatest wanderers being also strong of wing. Most of the Grouse tribe and many of the hardy, seed-eating, semi-omnivorous Passerine birds, are nearly or quite non-migratory, while such exclusively insectivorous and berry-eating species as Swallows, Flycatchers, Warblers, and many of the Shore-birds make semi-annual journeys of thousands of miles. Again, many birds that are resident as species over large areas are, in winter, more or less nomadic as individuals; in other species the more northern representatives move to a small extent north or south with the change of seasons. In the species of this latter class the individuals that breed in the southern part of the common range of the species are permanently resident throughout the year, while those that breed in the northern part move to lower latitudes at the approach of winter, returning to their breeding stations with the return of summer. Other species entirely leave their breeding ranges in winter, migrating often thousands of miles to reach their winter quarters. There is thus every degree of migratory movement in different species of birds, from slight nomadic movements to extended migration, in accordance with the physiological needs of the species.

\* The present article, written by request, is a brief statement of the author's present views on the subject of Bird Migration, to which he has for many years given careful consideration. To go into a discussion of the whys and wherefores would require the space of a volume. It has therefore seemed sufficient to give here his conclusions, with merely a slight thread of argument and evidence.—J. A. A.

The life of the bird, like that of most animals and plants, is made up of annual cycles. The controlling force that governs these cycles and determines the manner of life of the species is the fundamental fiat of Nature, "to increase and multiply"—the perpetuation of the life of the species. As Mr. F. M. Chapman long since pointed out,\* most birds seek seclusion during the period of reproduction, or, as in the case of birds that nest in colonies, like many of the sea-birds, resort to special breeding places.

In many instances they repair to some islet well within the usual range of the species; in others to some point more or less remote from their range during the non-breeding season. In the first case, where the resort is within the usual range of the species, the assembling of the birds at some long-used breeding station is not usually considered as migration; yet the nature and purpose of the movement is the same in both instances, namely, to secure a safe and congenial breeding place. In each case, also, the movement is characterized by the same periodicity and unanimity of action. The first class is illustrated by such species as the Brown Pelican, the Man-o'-War Bird, and various species of Boobies, Albatroses, Petrels, and Terns; the second by the White Pelican, various species of Auks, Guillemots, Petrels, Shearwaters, etc., as, for example, the Wilson Petrel, which inhabits the North Atlantic in summer and resorts to certain Antarctic islands to breed during the northern winter.

As in the case of migration, where there is every degree of seasonal movement between a strictly sedentary life and greatly extended journeys, there is here also every stage of differentiation between the gathering of the hordes to some near-by islet for reproduction to a journey of many thousands of miles to reach some favourite breeding resort. In the case of birds that do not breed

\* "Auk," XL, 1894, pp. 12-17; see also his "Camps and Cruises of an Ornithologist," 1908, p. 88.

in colonies but are diffused in the breeding season over the larger part of a continent, the influence governing the selection of a breeding-site is the same as in the case of birds which nest in colonies, namely, the approach of the breeding season. The cause of the seasonal movement is thus beyond question physiologic, and hence periodic, and irresistible.

If climatic conditions were everywhere nearly uniform there would doubtless be no migration, as there is now practically no true migration among the indigenous birds of sub-tropical and inter-tropical latitudes near sea-level. The difference in physiographic conditions due to differences of altitude and latitude gives rise, of course, to the widely diverse biotic conditions of different parts of the earth's surface. It is generally believed that in pre-glacial times biotic conditions were vastly less diversified than at present; it hence seems reasonable to infer that the breaking up of this uniformity of climatic conditions by the glacial period greatly changed the distribution of animal and plant life, which to a large extent must have been either driven southward or exterminated over the glaciated regions. With the recession of the ice the habitable area at the northward became gradually extended, with marked seasonal changes from pre-glacial conditions. There was now established a distinct alternation of summer and winter, so that many birds found congenial homes in summer in districts which were uninhabitable to them in winter. As the recession of glacial conditions was gradual, the belt of new habitable land must have been at first narrow and the later increase gradual. Here, then, were just the conditions to develop a migratory habit in such birds as were able to extend their summer range to the northward. The necessity for migration would vary with different species in accordance with the character of their food and their adaptability to new conditions. Birds organized to subsist upon insects and pulpy fruits would find such food in summer far to the northward of where



it would be available in winter, while those able to subsist upon a more varied diet would be less affected by the change of season and hence make shorter migrations.

It is obvious that migratory birds, of whatever class, which seek high latitudes for breeding stations, find there the conditions most favourable for reproduction, as regards not only food but the general environment. Otherwise they could not have successfully persisted for possibly millions of generations in the selection of a breeding station at which they can live for barely a fourth of the year. Migratory birds that breed in the temperate and colder latitudes are wanderers for from seven to nine months of the year; while some change their residence by a journey of only a few hundred miles, others travel thousands of miles, as do many Warblers, Tanagers, Swallows, Flycatchers, and Shore-birds. It is therefore by no means a mere figure of speech to call a bird's breeding station its real and only home, for here it is not only a settled resident for a definite period, but is occupied with the most important function of its life, the reproduction of its kind.

As already said, the district selected by a large proportion of migratory birds as a breeding station is climatically uninhabitable to them beyond the short period required for the duties of procreation. The reason why they leave it is therefore not far to seek, and it is hardly worth while to waste words over the question whether the return to milder latitudes is due to a fall of temperature, to the failure of the food supply, or to both combined. Neither is it material to inquire whether the species might or might not be able to withstand the environment at the breeding station for a few days, or even weeks, after the young of the year are sufficiently mature to start on the long journey to a milder country; for, since the purpose for which the long journey to the breeding station was undertaken has been accomplished, why should they linger? Much more time, however, is usually taken for the autumnal journey than for the

vernal, which, as the breeding season approaches, is prosecuted with increasing rapidity till the goal is reached, whereas in autumn it is only necessary to make such progress as the advancing season demands. The fall journey is only a part of the round trip to and from the breeding station, the one journey being the complement and necessary consequence of the other, the two together constituting the full cycle of migration.

As already shown, the sole and all-sufficient cause of migration is the necessity of a congenial environment for the reproduction of the species. This need may be met in the seclusion and isolation of a rocky islet or cliff, or the proper conditions may be afforded by an Arctic tundra. The inception of the movement is the periodic necessity of reproduction, and the journey to the breeding station, be it long or short, is made in obedience to physiologic changes which the bird is powerless to resist or control; the return journey is obviously a natural and necessary sequence. The return of a bird to its particular ancestral breeding station, and the character of the station selected, are as distinctive of the species as are the colour of its eggs, the character of its nest, the peculiarities of its song and call-notes, or the markings of its plumage. It becomes, therefore, unnecessary to ascribe, except figuratively, the cause of the movement to "strong home love," notwithstanding the fact that the individual bird not only returns to the region of its birth, but will often, as is well substantiated, return year after year for many successive years to absolutely the same nesting site. It is also well-known that during the non-breeding season different local races (subspecies) of a widely distributed species are often found associated during their migratory wanderings, and that when the season of reproduction approaches they will take different migration routes to their respective and often very remotely separated breeding stations.

It is a well known fact than in many species the old birds migrate first, both in spring and fall, the immature

birds following, sometimes, in the case of the fall migration, much later. An instance that has attracted attention is the European Cuckoo, in which the parents depart from their summer home long before the young leave. This condition, however, is by no means unusual. since, in North America at least, it has been found to be the rule rather than the exception. This has led to the question, How do the young birds of the year, left behind by their parents, find their way in migration? In Mr. William Brewster's memorable paper, "Bird Migration," published many years ago,\* and based on long field experience, he states (referring to North American birds) that "the adults of many, or, as [he] believes, *all* species migrate southward first, and often several weeks in advance of the young. It is perfectly true, nevertheless, that a few old birds are always to be found in the larger flights, although the latest of these are certainly composed mainly of young." Young birds, when left behind by their parents, it is believed, join the general throng of southward migrants, which always includes birds of many species.

All this goes to show that the present breeding stations of birds are, generally speaking, of the highest antiquity, and are an inseparable part of the evolution of the species; that the habit of migration in migratory species is likewise inseparable from the history of their differentiation, and has become as much a specific trait as any of their physical characteristics. The origin of migration and its doubtless gradual development is so remote that the explanation must ever remain hypothetical, but an hypothesis may be so well grounded that it may be accepted as a reasonable certainty. Many birds not much unlike existing types—belonging in many instances to the same genera—existed in tertiary times. Since this period the earth's surface has undergone great physical and climatic changes, which have in turn immensely modified not only the distribution but the physical

\* Memoirs of the Nuttall Ornithological Club, No. 1, 1886, pp. 1-22.

characters of its inhabitants. These facts furnish good ground for the belief that bird migration, possibly already incipient at this remote period, became emphasized and mainly developed by the recession of glaciation in the northern hemisphere. Nor is it improbable that somewhat similar climatic changes in past geologic times afford a similar explanation of migration in birds and other animals in the southern hemisphere.

That birds, and many other animals, perform long migrations at regular periods, is a fact not open to cavil. It is also evident that a reasonable cause for these periodic journeys may be assigned. Hence a large part of the "mystery" that has hitherto enshrouded the general subject of bird migration may be fairly regarded as having been dispelled.

The manner of migration, as regards season, routes, and extent, is now also known with considerable detail for a large number of species. There still remains for consideration the much discussed question of how the migratory hordes find their way.

While we are unable to fathom the workings of the bird mind, or to take the measure of their mental and sensory equipment, it must be recognised that birds are endowed with the ability to remember and recognise landmarks, since otherwise it would be impossible for them to return year after year to the same nesting site, after months of absence and thousands of miles of travel. With the abundant evidence we have of their ability to remember landmarks and to revisit former nesting sites, it seems unnecessary still to regard their ability to find their way in migration as a "mystery."

It is generally conceded that birds are endowed with great sensitiveness to atmospheric conditions, and readily recognise approaching changes in the weather. As was long since made known by Cooke,\* and has since been repeatedly confirmed by independent investigation, in Europe as well as in America, birds migrate from areas of high barometric pressure to areas of low barometric

\* "Report on Bird Migration in the Mississippi Valley," 1888.

pressure. In general this direction is northward (in the northern hemisphere) in spring and southward in autumn. In other words, in general the migratory movements of birds in spring are coincident with the alternation of warm and cold waves, the former favouring and the latter retarding or checking the movement. Thus the "waves" or "rushes" of bird migration in spring are not only necessarily from the south northward, but are coincident with a warm atmospheric wave and a southerly wind.

While these are the favourable conditions for bird migration, birds move more or less under the ordinary conditions of the weather proper to the season, and are only held in check by the unfavourable conditions of a cold wave and northerly winds. The conditions of the autumnal movement are in a sense reversed, the birds moving southward with, or just in advance of, a cold wave and a northerly wind.

Many recent writers, as well as those of earlier days, delight to refer to bird migration as a "great mystery," "a mystery of mysteries," as surrounded "with a halo of mystery," etc. While there is still much to learn regarding the general subject, and the faculties and mental attributes of birds, it would seem that enough is known to remove migration from the realm of mystery. The origin and present inducement to migration seem open to reasonable explanation, and some light seems also to have been thrown upon the subject of how birds find their way during their migratory journeys. In addition to keen powers of vision, a memory for landmarks, and remarkable sensitiveness to meteorologic conditions, they seem also to be endowed with a sense of direction, which recent experiments with Noddies and Sooty Terns on the south-eastern coast of the United States\* seem to demonstrate as present, if as yet unexplainable. With these facts in view it seems not difficult to believe that while the ability of birds to find their way in migration is truly wonderful, it implies little that is really mysterious.

\* *cf.* "Bird-Lore," Vol. X., 1908, p. 134.

## THE LESSER REDPOLL IN SUSSEX.

BY

J. WALPOLE-BOND.

IN his " Birds of Sussex " (1891, p. 134), the late Mr. Borrer wrote of this species (*Linota rufescens*) that " it is seldom met with in the Weald, and I have but once seen it there." Beyond this rather unconvincing statement he has nothing further to add about its status, except to mention that " it is often captured in very large numbers in clap-nets, and, at the time of immigration, it has frequently been taken in small traps on the roofs of the houses in Brighton and Hastings." Then, writing of its nesting, he continues, " I have never heard of its having done so in the county in a truly wild state. Mr. Booth, however, mentioned that a few nests were found in alders and willows in 1869 near Brighton ; he supposes from the worn and faded appearance of the birds that they had escaped from confinement." Mr. Booth was a capital and expert field-ornithologist, yet I doubt if he was correct in this instance, seeing that Lesser Redpolls often look worn and faded during nesting operations.

Now, whether it is that, during the past seventeen years, the bird has kept on gradually increasing in Sussex, or whether it is that it was formerly overlooked, I know not, but at the present day, at all events, the Lesser Redpoll is a resident in Sussex, though, of course, very much commoner and more widely distributed in winter than in summer. In fact, during the winter there is hardly a district in the county where it does not put in a roving appearance from time to time. In the breeding season, however, things are somewhat different. For, although it nests regularly, either in scattered pairs or, and more usually, from two to eight pairs together in a very restricted radius of ground, in a goodly number of spots in the wooded districts, it is ever most partial to the Weald. I could enumerate quite a number of locali-

ties within easy touch of Horsham where this sprightly and engaging Finch rears its young annually ; but, be it noted, in *varying numbers*, for in some years (such as, for instance, 1905 and 1908) it is much more plentiful than in others.

These Sussex Lesser Redpolls affect several quite different nesting haunts. But they are *very local*, and their presence is, of course, subject to that of trees in more or less abundance. Among favourite haunts are the alders, swaying till they meet over those sluggish streams which connect with, or flow out of, many of our big mill pools ; the shrubberies and ornamental grounds of country mansions ; long "strippy" plantations of saplings ; hedgerows ; "shaws" intersecting common land with their outlying, self-sown conifers ; and, lastly, thinly-planted larch plantations of fair growth. I am intimate with one such small planting of about an acre in extent, growing on a bracken-decked slope, which some years harbours as many as six pairs. Thus it will be seen that there is no fixed rule for the haunt. But it is well worth remarking that nearly all the resorts, if not actually by a pond or stream, are in damp spots where the ground is seldom indeed anything but inclining to the boggy. And a great many haunts are close to a road. I have located many a pair as I have walked or cycled slowly along the highway, for the Lesser Redpoll draws attention to its haunt by continually flying about in the air, trilling and twittering the while.

Indeed, during the entire summer the Lesser Redpoll gives much of its leisure to the air. One minute it alights in some tree—it is particularly enamoured of conifers—usually near, if not on, its actual summit, whence, after two or three minutes breathing space, it flits off, as it were, aimlessly flying to and fro for a stretch of a hundred yards perhaps, and ever and anon undertaking far longer journeys, and while it flies it trills.

These love-flights are nearly always conducted at an altitude of about twenty feet or so above the tree-tops,

unless the trees are very lofty, when they are about on a level with their summits. Besides trilling when on the wing, the bird also trills when perching, though then the performance is subdued as compared with the aerial utterance. And where several pairs are nesting very close together—as is frequently the case—all the males may be in the air together, one taking up the trilling refrain as the other ceases. I have also heard a softly modulated song from the male—always when he has been settled close to the nest. It first ascends, then descends the scale, and you must be near indeed to catch the notes at all.

As a general maxim, birds which congregate in autumn and winter, as the species under discussion does (though I have never seen very big gatherings; usually a small party, or even only two or three, whilst a single bird at those seasons is no uncommon sight), pair annually. Despite this, however, I know many haunts which are patronized each succeeding summer by Lesser Redpolls, a fact which suggests that at any rate one of each given pair returns unerringly to the old trysting place with his or her new partner, as the case may be. In fact, I have, on several occasions, found this year's nest built within a few feet of the relics of last season's. Although the Lesser Redpoll cannot claim to be gregarious in the summer, it is certainly very social, and in some districts it is nothing for three or four nests to be placed in as many trees within a radius of a comparatively few square yards.

For a resident species the Lesser Redpoll is a notoriously late breeder, as, although the gatherings disperse and pairs are formed during the early part of April and all through that month, I can never recollect finding eggs before the middle of May, and that must be reckoned as an exceptionally early record. Even here in Sussex I seldom think it worth while to look for the nests till the last few days of that month or early in June. In 1908 the first eggs I saw were on June 6th, and between that date



and the end of the month I found several with *fresh* eggs. Yet, in 1907, in much the same district, I knew of two nests on June 17th, one containing big nestlings, the other which the young left that very day, and this in spite of the backwardness of the season. Occasionally a second brood is reared late in July, but, of course, in a different nest.

As the haunt is varied, so is the position of the nest. Some examples—and they are ever the neatest—may be found in hedgerows, either in a thorn or a sloe bush, sometimes as much as eight feet from the ground, but more usually from two to four. At other times they are in the “crotch” of an alder by the stream; in a hedgerow elm or in a furze bush. Yet, in Sussex at all events, most nests are built as high up as possible in sapling conifers, birches, oaks, or beeches of from nine to eighteen feet high. They are always in a “crotch,” and, as a further protection, portions of the nest material are often woven round the branches or twigs forming the “crotch.” I have also seen nests at the end of tapering fir, larch, and holm-oak boughs, though in this case the trees have been lofty and of big girth. In one locality (in Sussex) all the nests are in stripling larches, some of which are really tall, either against the bole, resting on some tiny sprigs, or higher up on a branch projecting from the main stem, when it lies against the bole or as much as a foot away from it.

The nest, though exquisitely neat internally, always has rather a rough, not to say straggling, exterior. It varies somewhat in composition, of which the following notes, relating to four nests, will give a fair impression. The first is a very typical example, and is made of a good many slender twigs, fibrous rootlets, dry grass, and a little of the same material in a green condition, and a few flakes of moss, wholly lined with vegetable down. The second shows dried grass and plenty of greyish-green tree lichen externally, whilst the finishing off is first a layer of horsehair in strands, then a pad of vegetable down,

and, finally, a good accumulation of Wood-Pigeon's and cock Pheasant's feathers. This is a curiously beautiful nest, and it is further peculiar owing to the fact that only one patch of the snowy vegetable down showed up in the final lining. Number three is composed of grasses, roots, and a few twigs, lined with hair, down, and a few small feathers, whilst in its lowest foundations I unearthed a strip of decayed wood, a dead leaf or two, and a few spiders' cocoons. The fourth exhibits a good deal of very green moss over the usual fine grass stems and flowers, as well as a few pieces of grey lichen, and the padding is of horsehair, down, and a sprinkling of feathers, including those of a Tawny Owl and Partridge. The vegetable down is a characteristic of and is never absent from any nest, and is frequently woven into its foundation. An average nest measures  $3\frac{1}{2}$  inches across by  $2\frac{1}{4}$  deep, with an egg-cup  $1\frac{1}{2}$  in diameter and  $1\frac{1}{4}$  in depth. Should wet weather prevail during nest-building, many a home is deserted, because so waterproof is the padding of down that in some cases the nest actually holds rain for a short time, and in exceptionally severe storms this is an unlooked-for calamity which overtakes nests holding eggs or young.

Incubation, which frequently commences with the first egg laid, is principally performed by the female, and lasts from twelve to fifteen days.

The Lesser Redpoll is usually a very close and intrepid sitter. Sometimes I have stroked one or even lifted it bodily off its eggs, but more usually it slips off the nest when an intruding hand is within an inch or two of it. I have known one to perch on the hand of the man who was examining the eggs; and I have seen another return and nestle down into the fork from which there had just been taken the nest; whilst you can fearlessly remove a nest from its site and replace it after examination without causing desertion.

The nest is not a very easy one to discover. To find it usually means long and hard searching in a spot where the

birds are frequently seen. And in any case, especially when they are in saplings in full leaf, the nests are far from easy to see. But the birds themselves often lead to its ultimate discovery, the male by trilling and singing just above or close to it, and the female, or the two together, by repeatedly flying to one special spot in a line of covert. And if, as you scramble as best you may through a strip of closely-planted saplings, you suddenly hear the alarm-cry from somewhere in the greenery overhead, you may rest assured that a nest is close by for the finding.

# NOTES

## MARKING BIRDS IN SCOTLAND.

MAY I trespass on your space to the extent of a few lines to draw the attention of readers of *BRITISH BIRDS* to a scheme for marking birds which we have just set afoot? This inquiry into bird migration is to be carried out from the Natural History Department of the University of Aberdeen. The details are similar to those of the Rossitten enterprise, of which I have already given some description in these pages (Vol. II., p. 362). As I understand that our enterprise is to be closely followed by the appearance in the field of a similar one to be carried out under the auspices of this magazine, I cannot make any appeal here for co-operators to assist in the work of marking, and therefore confine myself to asking that any readers of *BRITISH BIRDS* finding one of our marked birds will return the ring, preferably with the foot or even the whole bird, with particulars of date, locality, etc., to "Bird Migration Inquiry, Natural History Department, The University, Aberdeen, N.B." We shall refund postage whenever desired. Our rings are marked "Aberdeen University" on the sizes for Lapwing and upwards, but we hope to get some returns for small birds marked with the contracted address (in smaller characters) "Abdn. Univ." There is a registered number on each ring.

A. LANDBOROUGH THOMSON.

## THE REDSTART IN SUSSEX.

ALTHOUGH the Redstart comes in quite well amongst the usual rush of summer migrants, it is, so far as I can gather from personal as well as from outside sources, an extremely rare breeder in Sussex. In the Weald it is practically non-existent, as it is in the vicinity of the coast round Eastbourne, Brighton, and Worthing, to enumerate but a few spots. I am, therefore, anxious to know if any of your numerous readers have found the nest in Sussex, and if so, when and where. By detailing this matter much valuable assistance would be lent to my forthcoming work on Sussex ornithology. It is a remarkable fact that the Redstart should be so rare in Sussex, seeing that in parts of Kent, at any rate, it is quite a common bird. So it is in Essex.

JOHN WALPOLE-BOND.

## DARTFORD WARBLER IN SUSSEX.

A MALE specimen of the Dartford Warbler (*Sylvia undata*) was shot by one of the watchers in Pett Level, Sussex, on April 3rd, 1909, and was brought in the flesh to the Hastings Museum on April 5th.

W. H. MULLENS.

## SOME SUSSEX RAVENS.

I DOUBT whether any inland breeding place is at the present time used by Ravens in the county of Sussex, but should be pleased to find that I am wrong. Borrer (*Birds of Sussex*) mentions five inland localities where the Raven bred, or had formerly done so, namely, Danny Park, Wolstonbury Hill, Burton Park, Parham Park, Bramber Castle, and he also refers to the Petworth Park Ravens, so graphically described by A. E. Knox (*Orn. Rambles Sussex*). In a previous number of this magazine (Vol. II., p. 279) I have told of the destruction of the Heathfield Park Ravens as late as 1876, and now put on record the date of disappearance of the Ravens from Ashburnham Place. The "Ravens' Toll," or clump, consists to-day of sixteen ancient Scotch firs, scarred and weather-beaten, but these remaining trees are evidently only a portion of the original group which once crowned the knoll. They stand not more than 150 yards within the palings of the deer park of Ashburnham Place, which borders the high road between Battle and Ninfield, and directly opposite to Agmerhurst House. It is a fitting position for a Raven's nest, for the view embraces a great extent of fair country. Beachy Head, the Downs, the Weald, and, immediately beneath, the stately home of the Lords of Ashburnham, enveloped in woods of noble oaks and beeches, with green park and broad waters. When lately visiting this spot I had the advantage of being accompanied by Thomas Hook, now eighty years of age, who had passed all his life as one of the gamekeepers on the estate, and with whom the nesting of the Ravens, which he had watched from boyhood, was an event of annual interest. He pointed out the actual tree in which the birds had nested; he never heard any complaint of damage to animals made against these Ravens, they ate a dead fawn or hare, but never to his knowledge attacked living ones. The late Earl of Ashburnham had the young broods of Ravens shot yearly, but never allowed the parents to be molested. They bred in the "Ravens' Toll" annually, and for the last time in 1877, but disappeared in 1878, the year in which the above-mentioned nobleman died. The coincidence of the two events

was much commented on at the time by the people of the estate, and the departure of the Ravens was looked on by them as a bad omen—an interesting survival of the sentiment of veneration for the bird, which was so generally held by our forefathers.

H. W. FEILDEN.

#### CUCKOO'S EGG IN BLACKBIRD'S NEST.

I HAVE heard it asserted that whenever a Cuckoo places its egg in the nest of a Blackbird (*Turdus merula*), the latter ejects the alien egg. As the Blackbird is not very often chosen as a fosterer by the Cuckoo, such assertions are difficult to prove or disprove. The following incident may therefore be deemed worthy of record, as stated by Rev. C. F. Thornewill, vicar of Calverhall, near Whitechurch, Salop. On May 9th he found that a Cuckoo had placed an egg in the nest of a Blackbird, in his garden. It was deposited when the Blackbird had laid only one egg, but she subsequently laid three more. Mr. Thornewill took the Cuckoo's egg and two of the Blackbird's, and has them now in his collection.

H. E. FORREST.

#### NESTING OF THE SNIPE IN WILTSHIRE.

ON May 6th last, when searching a reed-bed in the water-meadows along the River Kennet, about four miles east of Marlborough, I flushed a Common Snipe (*Gallinago caelestis*). I made a thorough search all round the spot, but could find no signs of a nest. The following week, on May 12th, I visited the place again, and a Snipe got up at the same spot. After a short search I found the nest, which was very well hidden by small reeds, grasses, and wild flowers of various kinds. The nest was very slight in structure, and contained two eggs, which were in every way typical of those of the Snipe. The reed-bed is about 100 yards long, varying from 50 to 30 yards in breadth. Along one side there is the river, and along two-thirds of the other side there is a withey bed, while on the remaining third of this side there is a hedge. Every three or four yards there are small channels of water running across the bed, at right angles to the river, and the nest was placed about six inches from one of these channels. The whole of the reed-bed is thickly covered with small reeds and wild marsh plants about eight inches high. This is the first nest of this species found in the Marlborough district, and Mr. Meyrick thinks that it is the first nest recorded for Wiltshire.

R. O. MATHEWS.

[We are very glad to publish this note, if only because it is a good illustration of how much there is yet to be done in working out the distribution of some of our commonest birds. Dr. F. G. Penrose tells us that the Snipe nests at Downton, near Salisbury, and we have no doubt that it does so in many other places in Wiltshire, but we are surprised to be unable to find a record (we have not made an exhaustive search) of its nesting in the county, although it is well known to breed more or less commonly in the surrounding counties. In his "Birds of Wiltshire," the late Rev. A. C. Smith seems to consider the Snipe as a winter migrant only in the south of England, yet it was well known to Gilbert White a hundred and fifty years ago as a breeder in the adjoining county of Hampshire.—EDS.]

#### BAIRD'S SANDPIPER IN NORFOLK.

IN his "Ornithological Report for Norfolk" (*Zoologist*, 1909, p. 124) Mr. J. H. Gurney makes the important announcement that a specimen (sex and age not noted) of Baird's Sandpiper (*Tringa bairdi*) was shot at Hunstanton, Norfolk, on September 16th, 1903. The bird, "which was not recorded at the time, and has only been recently brought to the knowledge of Norfolk naturalists, was received on the 19th by Mr. George Bristow, taxidermist, St. Leonards, and examined while still in the flesh by Mr. M. J. Nicoll, himself the shooter of the first British *T. bairdi*." This second specimen has since passed into Sir Vauncey Crewe's collection at Calke Abbey. It will be remembered that the late Howard Saunders included Mr. Nicoll's specimen in his "Additions to the list of British Birds since 1899," contributed to our first number (Vol. I., p. 15).

H. F. W.

#### RUFFS IN NORFOLK.

ON May 6th, about six a.m., at Hickling, while crouching behind some bushes watching a pair of Stonechats, ten Reeves and three Ruffs (*Machetes pugnax*) passed so close that I was able to note the brilliancy of one Ruff in particular. Later on, about ten o'clock, a flock of from seventy to eighty flew over the marshes, going due east. All that day these birds were about the broad in large flocks, sometimes dropping down to feed, sometimes circling round for several miles; with glasses we could watch their progress as they made the circuit of the marshes. When crossing the broad they flew quite low down. For several days in succession I have come across little batches of these birds, standing about in the

shallows or feeding, but so far have seen no fighting. It's "an ill wind that blows nobody any good," and the north-east gale, that has interfered sadly with photography or bird-watching, has had its compensation.

E. L. TURNER.

#### BLACK-TAILED GODWITS IN NORTH WALES.

WHILE studying the bird-life on Morchras Island, near Barmouth, North Wales, on April 10th, 1909, I was delighted to find four specimens of the Black-tailed Godwit (*Limosa belgica*), feeding on the marsh after the tide had receded. Two were in the reddish plumage of summer, the others in the drabish grey of winter. As these were the first living specimens I had had the good luck to see in Great Britain, I studied them through my field-glasses for one hour. The birds appeared to be quite oblivious of my presence, and fed leisurely, keeping to one spot, which appeared to supply plenty of food. The colour of the light portion of the bill was a pale pink, and the upward curve of the mandible much more acute in the living than dead specimens. In stretching out their legs and wings the birds several times displayed the broad black band across the tail. This bird must be regarded as very rare for Wales. Mr. H. E. Forrest in the "Vertebrate Fauna of North Wales," states that Mr. Rawlings of Barmouth noted one on the estuary, but that gentleman declared that he had never seen the Black-tailed Godwit; whilst the taxidermists at Aberystwith also said that they had never seen this species.

F. COBURN.

#### BLACK GUILLEMOT IN CORNWALL.

ON April 15th, 1909, some friends and myself, when starting on a fishing expedition at the Lizard with Mr. R. H. Harris, a keen local naturalist, saw a bird come several times into the cove and finally settle on the rocks within twenty or thirty yards of us. We then clearly identified it as a Black Guillemot (*Uria grylle*). Mr. Harris told us that he had seen a similar bird last year, but had not found out what it was.

HERBERT C. GRIFFITH.

#### EARLY NESTING OF THE GREAT CRESTED GREBE.

A FEW years ago I saw a pair of Great Crested Grebes (*Podiceps cristatus*) piling up nesting material in a reed-bed on one of the Cheshire meres on March 17th, and it is not unusual to find fresh eggs in the second half of April, but until this year I had never seen young birds in the first week of May. At Weston Turville Reservoir, near Aylesbury, on May 2nd,



incubation in some cases had probably not begun, as several birds were indulging in the grotesque bowing and head-shaking that marks the course of courtship in this species; two birds were brooding on nests in the rushes, and it was obvious from the pose of another, sitting high in the water as it did, with wings slightly raised, that it was carrying young birds on its back. A closer inspection with the glass showed that the young birds—three in number—had not long been hatched, for, apart from their size, the ground colour of their striped downy plumage was much whiter than is the case with nestlings a few days old, and except when they craned their necks in order to be fed they were almost entirely concealed by the sheltering feathers of the parent bird. Now and then one of the young ones would slide into the water from the old bird's neck; it never remained there, however, for many seconds but scrambled up over the old bird's tail to regain its floating cradle, using feet, wings and, I think, bill in doing so. The old bird, from time to time, picked up something from the surface of the water, and, turning its head, fed the jostling trio on its shoulders. Its mate, too, foraging in the vicinity with lowered neck, tippet trailing in the water, and bill submerged, made frequent visits with food which it gathered on the surface—I did not see it dive—and fed the young ones. I could not make out what the food was, but whilst I was watching the birds the old one twice swam up with a white feather in its bill—perhaps gleaned from the water, perhaps plucked from its own plumage—and proffered it to the young, one of which on each occasion swallowed it with many gulps and struggles. This act suggests that the curious habit of swallowing feathers obtains in Grebes at a very early age.\*

CHAS. OLDHAM.

#### SLAVONIAN GREBES IN SUMMER IN ORKNEY.

WITH reference to the occurrences of the Slavonian Grebe (*Podiceps auritus*) in Scotland in summer, mentioned in Vol. II., p. 334, these birds often stay very late in Orkney during adverse winds, but certainly do not nest there. On April 5th, 1908, my boatman got one there in almost full summer plumage; on April 10th two in full summer plumage flew past within fifteen yards of me, and I saw several others three parts changed, and they were still about during the first week in May. The latest date was the end of the second week in June during 1907, when my boatman procured one

\* In "The Home-Life of some Marsh-Birds," Miss E. L. Turner records (p. 13) how a parent Great Crested Grebe offered feathers to the young when only a day old.—H.F.W.

in full summer plumage. These birds certainly begin to acquire summer plumage early in March, if I may judge from one half in winter and half in summer plumage which I shot on March 18th, 1907, on Loch Stenness, Orkney.

H. W. ROBINSON.

#### NORFOLK BIRDS.

IN Mr. J. H. Gurney's "Ornithological Report for Norfolk (1908)" (*Zool.*, 1909, pp. 121-138), we note the following interesting records, which have not been previously referred to in these pages:—*Barn-Owls* exhibiting luminosity were again reported by several observers, but no one has yet set at rest the question as to the cause of the phenomenon, which can only be satisfactorily accomplished by securing one of these birds and submitting it to a careful examination. *Bitterns* were reported as "booming" on March 23rd, April 12th, and October 2nd. The first *Spoonbill* visited Breydon Broad on March 31st (this seems the earliest date on record in the district); four were seen at the same place on May 13th, one was reported on August 8th, one on October 14th, while another was shot on November 21st, and this is one of the latest occurrences of this bird which has been recorded in Norfolk. A *Stilt* was reported on April 29th and an *Avocet* on May 28th, while a small flock of the latter species visited the north coast during that month.

H. F. W.

\* \* \*

IRISH BIRDS.—*Corrections*.—Mr. R. J. Ussher informs us that the *Black-throated Divers* recorded at p. 421, Vol. II., were not Irish birds, but were received by Mr. Williams from Norway. Also, that Ardagh mentioned under *Snowy Owl* (p. 412), is in co. Limerick and not in co. Kerry. Mr. R. M. Barrington writes to us to correct his record of the *Little Gull* mentioned on p. 420, which proves to be in immature plumage and not adult, and was shot on February 7th and not on March 7th.

SHOVELER AND WIGEON BREEDING IN CUMBERLAND.—Messrs. D. L. Thorpe and L. E. Hope record the breeding of the Wigeon on April 31st (? 30th!), 1908, at Bassenthwaite (*Zool.*, 1909, p. 191), and of the Shoveler near the River Esk on May 21st, 1908 (*t.c.*, p. 192). No further particulars are given.

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CHICKS OF THE SANDERLING.

(Drawn by P. H. Bahr from the Specimens obtained by Dr. W. S. Bruce on Prince Charles' Foreland, Spitzbergen, August 3rd, 1906.)



# BRITISH BIRDS

EDITED BY H. F. WITHERBY, F.Z.S., M.B.O.U.

ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., W. P. PYCRAFT, A.L.S.,  
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## THE CHICKS OF THE SANDERLING.

BY

WILLIAM EAGLE CLARKE.

(PLATE II.)

THE chicks of the Sanderling (*Calidris arenaria*), which form the subject of this contribution, are of historical interest, inasmuch as they are the first that have been made known to science. They were, however, exhibited by me at the meeting of the British Ornithologists' Club on the 20th of May, 1908, but have hitherto remained undescribed.

The Sanderling was said by Captain Edward Sabine, who accompanied Parry on his remarkable voyage in

search of the North-west Passage, in 1819-20, and who correctly describes the birds,\* to have been found breeding, in the summer of 1820, in considerable numbers on the North Georgian or Parry Islands. It was not, however, until 1863 that the first authenticated eggs were found. In that year MacFarlane obtained a single nest, with eggs, near Franklin Bay, on the coast of Arctic America. Since that date eggs from various localities have been obtained in the high northern countries of America and Asia and in Iceland; † but until the year 1906 the chicks appear to have remained quite unknown, though they appear to have been found on the west coast of Greenland. On August 3rd of the year named, my old friend Dr. Bruce, of Antarctic fame, found a Sanderling accompanied by her brood of four young, a day or two old at the most, on stony ground (a raised beach), about a mile from the sea, and some one hundred feet above its level, in the north-east part of Prince Charles' Foreland, Spitsbergen. This family party he secured, and most patriotically presented it to the collections in the Royal Scottish Museum, where the birds form an attractive mounted group.

Dr. Bruce's discovery fills up an important gap in our knowledge of this bird's distribution as a nesting species, since it bridges over the area between the tundras of Siberia and Iceland, and thus completes the chain of evidence that the Sanderling is circumpolar in its range during the breeding season.

Since Dr. Bruce's specimens were obtained chicks were taken in the summer of 1907 or 1908, by Mr. Manniche during the Danish Expedition to North-east Greenland. This, however, is not a new locality for the Sanderling as a breeding bird, for Dr. Pansch found several nests on

\* Appendix to Parry's First Voyage, p. cxix.

† Although it is extremely probable that the Sanderling has occasionally' bred in Iceland, the evidence is not quite conclusive. There is an egg in the British Museum ascribed to this species which was received from Proctor, and the Rev. H. H. Slater found a nest with incubated eggs, but the parent bird was not shot and the chicks proved to possess a hind toe, which is absent in the adults.—F. C. R. J.

Sabine Island, off the east coast of Greenland, during the German Arctic Expedition of 1869-70.

The chicks are difficult to describe, but fortunately they have been excellently depicted, on the accompanying plate, by my friend Dr. Philip H. Bahr. The ground colour of the upper-surface is greyish-buff, liberally variegated with black, some richer buff, and prettily spangled with white. There are no traces of longitudinal stripes—*i.e.*, the black (which predominates), buff and white markings do not tend to run in lines. The head and back are marked off by a somewhat broad nuchal collar of plain buff. The under-surface is almost white; and the legs and bill are dark leaden grey.

OBSERVATIONS ON THE MIGRATION OF BIRDS  
IN THE MEDITERRANEAN.

BY

COMMANDER H. LYNES, R.N., M.B.O.U.

## INTRODUCTORY.

WHILE serving in H.M.S. "Venus" on the Mediterranean Station from August, 1905, to February, 1908, I saw, one way and another, a good deal of the migration of birds, and in hopes that some of my observations may bring out a few fresh points or strengthen existing views on the subject, I have ventured to put together the following notes.

A man-of-war seldom stops long at any one port; my observations were consequently of a rather disconnected nature. We were fortunate, however, in 1906, in having three of the spring months at Crete, and five of the autumn and winter months in Egypt.

Malta, excellent for migration observation, but almost an ornithological desert in summer and winter, being the headquarters of the Mediterranean Fleet, was of course a frequent port of call during the commission; however, as the "Venus" never happened to stop there for more than a few weeks during the spring and autumn, I was unable to make many notes on the passage of birds through that island.

At Crete, in the spring (February, March and April, 1906), our opportunities for studying migration were not so favourable as could have been wished; the ship was at sea, patrolling the coast a great deal of the time, and when at anchor she always lay some distance from the shore. We left Crete, too, some time before the vernal migration had ceased.

In Egypt the conditions were much more favourable. We were there from August 23rd, 1906, to January 20th, 1907—spending most of our time at Port Said, with four short visits to Alexandria, going out of

harbour for a few days' gunnery and torpedo practice every two or three weeks. At Port Said the ship was moored close to the shore, birds on passage were constantly flying by and settling in, or even flying against, the rigging, and I was able to get ashore in the early mornings and in the evenings fairly frequently. Less than one hundred yards from the ship was the courtyard of the "Navy House" containing some six trees, whose foliage was a great attraction to migrants, and consequently to me, as one could go over there, see what there was to be seen, and get back to the ship in about ten minutes.

Since most of my conclusions are based upon observations made in Egypt during the autumn migration, I propose to deal with that first, then with the spring migration at Crete and, finally, with migration at sea, in the Mediterranean.

#### I.—AUTUMN MIGRATION AT AND AROUND PORT SAID.

Geographically, Port Said seems admirably suited for observing bird migration. Hosts of birds breeding in European Russia, and Central and South-eastern Europe, winter somewhere in tropical or sub-tropical Africa, and they must converge, on their southward passage, to the comparatively narrow, fertile strip of land between the great deserts of Sahara and Arabia,\* since it appears that, whatever may be the case in spring time, in autumn, when they lack the spring excitement of going up north to breed and many of them are in partial moult, birds do not progress at such a pace as would enable them to venture across the deserts, for fear of starvation overtaking them.

Port Said is in the centre of this strip, and being right on the sea-shore, is the first land to be seen by those birds that cross the Mediterranean Sea, after what must be *the* long over-water passage of their whole southward migration.

\* Palmen's route No. 4.

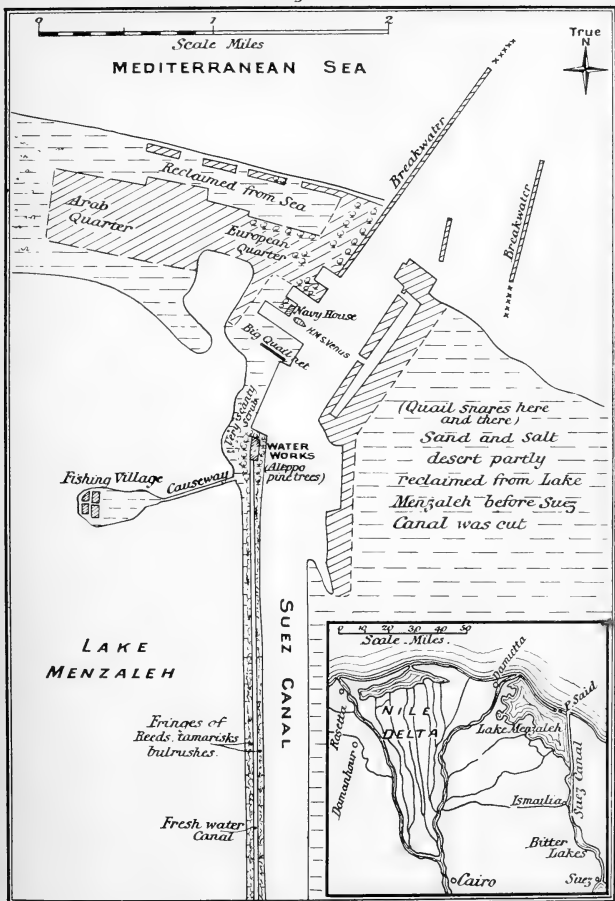
After such a voyage, land, even though the alighting place be but a pile of scrap iron among the docks, or a miserable little bush in the sandy wastes, is only too welcome to these over-sea migrants, as I shall hope to show.




It seems to me that for such a study as migration, the area under observation should be sufficiently restricted for an observer to have a comprehensive grasp of all that is going on in that area. All our best records appear to come from small and isolated areas—Heligoland, Fair Island, lightships and lighthouses, may be quoted as instances of this. If observations are made over a wide field it can but be bewildering, one cannot feel certain of departures, the birds may just have moved their position a little, and not really have continued their migration, arrivals may easily be overlooked, individuals unrecognised.

Considering the orders *Passeres* and *Picariæ* only, Port Said appears to possess about eight breeding species, all of which are resident, so when it is considered that the species actually identified in the autumn numbered eighty (further observation might very well increase the number to one hundred or more), it will be realised that at Port Said there is not the same difficulty in gauging the extent of a migratory movement as in places like England, where individuals of many species migrate over the heads, as it were, of resident individuals of the same species.

Now although, on the map, Port Said looks as if it might be a most unrestricted observing area, and to the eye of the steamship passenger, probably as if no bird could ever be tempted to alight in such a sandy, treeless spot, it really possesses in its physical features the requisites of an excellent observing station. From the accompanying chart (Figure I.), it will be seen that just south of the town lies the enormous expanse of salt water called Lake Menzaleh, which is very shallow and fringed with innumerable swampy and muddy islets,

Figure I



**PORT SAÏD DISTRICT** shewing the principal places mentioned  
 Buildings denoted thus   
*Big Chart only* } Bare Sand " " " " " " if with a little scrub   
 Trees & bushes " " " " " " if with a little scrub 

admirably adapted as feeding places for the water-loving birds. Natural accommodation for "land" birds is almost entirely dependent upon the presence of fresh water, for it is only in its immediate vicinity that anything but a low sparse scrub exists. Thus it is in the gardens, in and about the town, and around the banks of the fresh-water canal and the waterworks tanks that we find the tamarisk bushes, Aleppo pines, and other trees whose foliage forms so welcome a retreat for the swarms of tired and hungry little Warblers, Chats and other Passerine birds, after their long journey over the Mediterranean Sea.

In the following notes I have not attempted to include any but "land" birds, as I was quite unable to cope with the water and marsh birds as well: my remarks are therefore confined to the *Passeres* and *Picariæ*, together with a few notes only upon isolated species of one or two other orders. The subject will be divided into the following headings:—*A. Migration Period. B. Weather and Progress of Migration. C. Times. D. Direction. E. Height. F. Speed. G. Age of First Arrivals. H. Habits.*

#### *A. Migration Period.*

When we arrived at Port Said on August 23rd, migration was in full swing and had doubtless commenced some weeks before. The passage continued in full intensity, that is, the numbers of individuals remained great, though the species varied, up to the end of October, when the stream began to subside; but it was not until well into December that only belated migrants or winter visitors had finally ceased to arrive, showing (since, as I shall subsequently relate, the spring migration starts in February) that ordinary passage migration is really at a standstill only for a very short period in winter in the Mediterranean.

As an example of what may be called migration in



“full swing,” I will quote the following extract from my diary of August 26th:—

“Landed at 2.30 p.m. to explore the region of the fresh-water canal. Soon found that even in the little desert space before reaching the canal, birds were very abundant. Shrikes, Great Grey and Red-backed, were especially numerous, perched on every other bush, post, or knoll. Common Wheatears were also plentiful, and so were Quails, endeavouring to lie *perdu* in the sparse thistle-like bushes. As there was so much of interest on the route progress was but slow, and it was not until 4.30 that I had covered the half mile between the landing place and the grove of Aleppo pine trees around the waterworks at the terminus of the fresh-water canal. Here was a marvellous spectacle, literally thousands and thousands of little soft-billed fly-catching birds were among the trees. They were chiefly Willow-Wrens, but there were also many Bonelli's Warblers, Lesser White-throats, Nightingales, Great Grey, and Red-backed Shrikes, Spotted Flycatchers, Hoopoes, and doubtless other species invisible among the thick foliage. All the inhabitants of this ‘avian metropolis’ appeared to be imbued with activity, searching for food in a restless sort of way, as if anxious to catch what they could and be off again.

“Birds were by no means the only creatures whose presence was obtrusive for, being Sunday, ‘tout le monde en famille’ was picnicing under the same trees.

“Shooting, fortunately for human as well as bird life, being prohibited in the immediate vicinity of the waterworks, I was unable to procure any specimens there, but proceeding quietly down the canal, the tamarisks that fringe its banks were found also to be teeming with small birds. Boys were catapulting them, ‘sportsmen’ were shooting them, one gay *chasseur* had a sort of buttonhole consisting of a Quail, a Cuckoo, a Hoopoe and smaller fry, and many had network game-bags bulged out with Quail and ‘etceteras.’ Even among the

crowd of people Quails occasionally sprang from the bushes accompanied by cries of 'caille!'—'quaglia!'

"From five o'clock onwards there seemed to be a general movement of the birds to the southward following the canal. Commencing in a small way, this movement increased and appeared to reach its height shortly before sunset, when the air seemed to be full of small birds flying along from 20 to 150 feet high. On re-passing the waterworks trees about seven o'clock just before dark, the only birds I could disturb there were Nightingales and Spotted Flycatchers, all the others had apparently moved on."

\* \* \* \* \*

The accompanying diagrams (Figures II. and III.) will, it is thought, give a more or less comprehensive view of the progress of migration of the more notable species that visited the Port Said district throughout the autumn.

#### *B. Weather and Progress of Migration.*

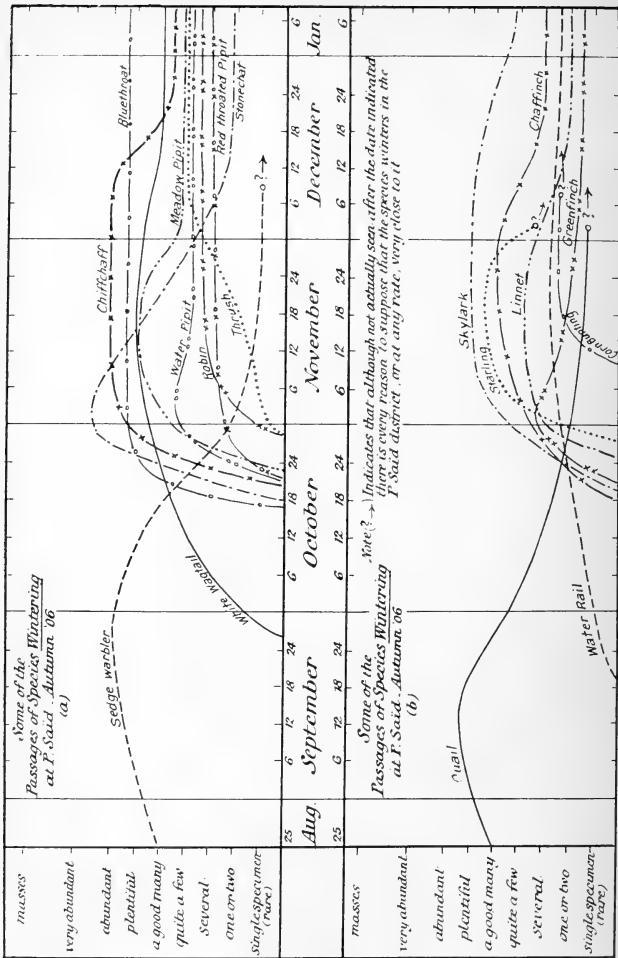
From the day we arrived at Port Said (August 23rd), up to the end of September, the sun pursued its daily course unobscured by clouds, light N.N.W. breezes always sprang up in the afternoons, and frequently continued throughout the greater part of the night, making the atmosphere cool and dry, in spite of an average temperature of 81° F. in the shade; the mornings and forenoons were always calm—each day's weather was the pattern for the next, with tropical regularity.

Very soon after the Autumnal Equinox there came a marked change. The wind, though still never more than a moderate breeze, blew more irregularly throughout the twenty-four hours, and nearly always from N.N.E. or N.E. when it was blowing at all—an alteration which brought a somewhat moister atmosphere, but could hardly be considered to have had any effect upon the migration.

The first rain, a thunder-shower, fell on October 7th, and there was some heavy rain on October 19th, but in



Figure III



other respects the whole of October and nearly all November kept fine and warm (average noon temp.  $77^{\circ}$  F. to  $72^{\circ}$  F.), the wind, never more than "fresh breezes," blew from N.E. or N.W., more often the former, and on one occasion only from the southward.

On November 27th the weather broke up suddenly; the temperature fell about  $8^{\circ}$  F., and winter, in the ever varying moods characteristic of that season in the Mediterranean, was ushered in by a succession of strong winds and foul weather from the S.W.

So that, as far as the local weather went, it may be said that up to the end of November the weather conditions were entirely propitious to migration—after that date the reverse.

It might perhaps be supposed that with such favourable and regular weather conditions throughout (practically) the whole of the migration period, the flow of migration would have been equally regular, but such was not indeed the case.

Throughout the whole period, even when migration was at its greatest intensity, the number of arrivals varied greatly from day to day. The migrants came in diurnal waves, sometimes a day, or even several days in succession would go by with a small wave, and then the next day there would be a large one, when migrant arrivals would simply swarm everywhere. By 8 a.m. any day one could say "it is a good migration day" (or a bad one), though nothing but the presence or absence of the birds themselves was there to enable such a fact to be stated.

All this only brings out what is, I think, generally accepted, and what it is only reasonable to suppose, viz., that it is mainly to the weather conditions at the point of departure for the migration flight, that one must look, in order to realise what the birds are going to do.

Now Port Said notably enjoys much more halcyon weather during the autumn months than Crete, Cyprus, Asia Minor, and even than Alexandria only 150 miles distant; and an inspection of the actual weather

conditions at the northern side of the Levant from August to October, 1906 (Figures IV. and V.), may reasonably be considered to provide an explanation of the irregularity of migration arrival at Port Said during that period; an irregularity which, with the continuously favourable weather conditions at the latter place, seemed so illogical.

In the diagrams (Figures IV. and V.), I have chosen the Constantinople district, merely because it is the only place near the north side of the Levant whose meteorological data I have been able to obtain. I should have wished to get the same for Cyprus and several points in Asia Minor as well; however, I think the Constantinople weather may fairly be assumed to represent more or less the weather which a large proportion of the migrants arriving at Port Said actually experienced at the point of departure for their flight across the Mediterranean.

Referring to the diagrams, it will be seen that even at the end of August the Constantinople weather showed signs of breaking up, in September about nine of the days were unfavourable to migration, and in October the weather became very unsettled, whereas at Port Said there was not a single day unfavourable to migration the whole of this time. At Constantinople the atmosphere was much moister than at Port Said, and the temperature much lower, in August averaging about 10 degrees lower, in September 15 degrees, and in October as much as 20 degrees.

Figure IV. gives, side by side with the weather chart, a graphic representation of the progress of migration through Port Said between the same dates, but I am afraid that the notes and observations are not full enough to make this as satisfactory as I could wish, and I would ask therefore that this part of the diagram be taken merely as suggestive of what more extended and complete observations might have made conclusive.

I would draw attention in Figure IV. to the short "hitches" very noticeable at the time in migration

Figure IV.

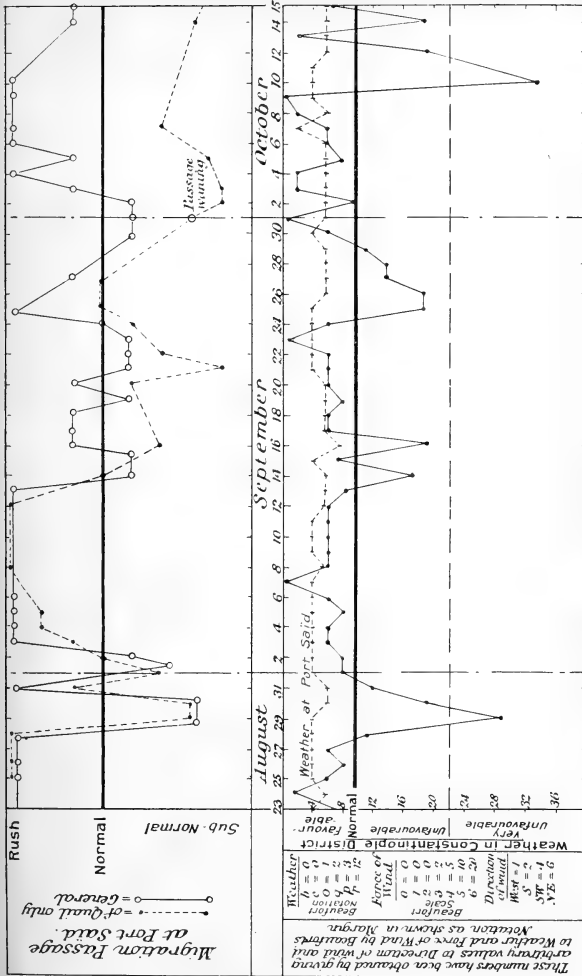
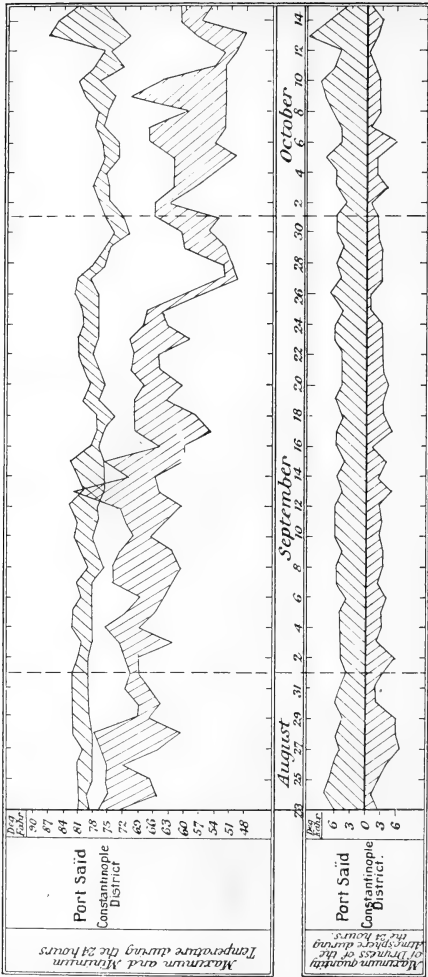


DIAGRAM Showing a relation between the intensity of Migration Passage at Port Saïd and the contemporary weather in the Constantinople District - Autumn 1906.

These numbers have been obtained by giving arbitrary values to Direction of wind and Force of Wind by Beaufort's notation as shown in Margin.

Figure V.



Comparison between Meteorological conditions at Port Said and in Constantinople district - Autumn 1906.



passage at Port Said at the end of August and middle of September, and these appear to have synchronized with the unfavourable weather at Constantinople; on the other hand the unfavourable weather at the latter place, at the end of September, fails to show a corresponding influence upon the passage.

### *C. Times.*

To analyze thoroughly the times of arrival and departure of migrants would have required very much more attention and application than I was able to give; it would necessitate the choice of a spot where one could be sure that arrivals were fresh arrivals; remaining on that spot the whole time, and being ever on the alert to pick up fresh arrivals and note departures.

The more one studies observations on this point the more one is driven to the conclusion, perhaps an obvious one, but nevertheless worthy of note, that although the main body of the migrating birds follows a certain routine, yet in all species there is a rather large percentage of exceptions to this routine, and one must be very cautious in drawing conclusions from single observations. And surely this must be so. Birds are so very dependent upon weather conditions, not only for their food but also for their locomotion, that to expect them to move as if by clockwork would be hardly reasonable.

So far as I could make out, the birds, speaking in a broad and general way, began to arrive, that is to alight, with the first streaks of dawn, the maximum intensity of the movement being somewhere about sunrise, after which it slowly diminished, but a fairly strong arrival nearly always went on until about noon, as could be observed from the ship in the harbour. From noon onwards there seemed to be no further migration until about half-an-hour before sunset, when a small number of fresh arrivals might frequently be seen coming in from the northward over the sea. This latter movement, though not to be compared in intensity with that of the

morning, was nevertheless a well marked one, and one which, occurring as it did with moderate regularity, must I think be put down as a feature of the daily routine and not merely as the influx of certain individuals which had become separated from the main body and had arrived abnormally late in consequence. Species noticed as taking part in this movement were Redstart, Nightingale, Willow-Wren, White Wagtail, Short-toed Lark, Sky-Lark, Nightjar, Corn-Crake and Water-Rail, besides some small unidentified species, and some *Limicolæ*.

Departures were more difficult to observe, but I concluded that they took place at dusk from the following facts:—The birds generally got more lively and were to be found feeding and moving about restlessly towards sunset after a decided period of torpor during the afternoon; large parties of birds were seen beginning to move southwards about the same hour; and on “off-migration” mornings, succeeding days that had brought plenty of birds, there were hardly any to be found.

As I have said, there was scarcely a species that did not present exceptions to the above generalization, and these exceptions may doubtless be put down to individuals on the “sick list” requiring longer than a day’s rest to recoup themselves.

One thing, however, impressed me as being an undoubted fact, viz., that taking it as a whole, the successive arrival, resting, feeding and moving on, was a performance that recurred every twenty-four hours at a greater or less intensity throughout the whole season of true passage, and I cannot but think that the statement of certain writers on migration that birds dawdle about and quietly moult on their autumn migration, though it may no doubt be true for places perhaps more remote from their breeding quarters, is not the case at Port Said, which is comparatively close to their breeding quarters.

Although at night time I watched several times with glasses for birds crossing the face of the moon, I never saw any, and the only instances I can quote of migrating

passage at night are (1) Bee-Eaters, September 19th, 6.30 p.m., at dusk, heard passing south, and (2) November 18th, 7 p.m., quite dark, when burning search-lights off Damietta, a number of small birds appeared from the northward fluttering in the rays. Both of these occurrences may have been the continuation of the evening arrival last mentioned.

It seems to me rather curious that such a representative South-east European species as the Bee-Eater should have been observed on the above and on one other occasion (also at dusk) only, during the whole migration season, and the incident may have its own significance with regard to the mode of migration of that particular species.\*

#### D. *Direction.*

The direction of the flight was always south or within a few points of it, but arrivals were inclined to come from a little to the east of north rather than from the west of it. This is perhaps only what might be expected from the geography of the Levant and its contiguous land areas.

*(To be continued.)*

\* Col. Irby (*Ornith. Straits of Gib.*) makes a similar note about the autumn passage of Bee-Eaters at Gibraltar, "all with few exceptions being heard passing at night."

THE PEREGRINE FALCON ON THE  
YORKSHIRE CLIFFS.

BY

A. D. SAPSWORTH, M.B.O.U.

IN Seebohm's "British Birds," published in 1883, he states that the Peregrine Falcon has most probably now deserted the cliffs of the Yorkshire coast for ever.



"The Dorr," Bempton Cliffs.

It is pleasant to be able to record not only that they subsequently made their reappearance, but that again this year they have successfully hatched out two

young. After some twenty years' absence from the cliffs a pair was seen in April, 1902, when the hen bird was shot. In 1904 a pair was again seen, but it is thought that they did not remain to breed. In 1906 they took possession of a ledge on a precipitous cliff at Bempton, known as "The Dorr." Here they successfully brought off three young birds. In 1907 they selected the same spot, and reared one. In 1908 they moved their



The Peregrine's Eyrie.

quarters some two miles further north, and, thanks to a reward offered by the Yorkshire Naturalists' Union and the protection they enjoy, they again succeeded in bringing up a single chick. This year they are once more in the same spot, and on the 24th of May I took the opportunity of making their closer acquaintance. The cliff at this point is some 400 feet high, higher in fact

than St. Paul's from the pavement to the top of the cross. The ledge is underhung and about two-thirds down the face of a precipitous chalk cliff. It can be seen from a bend above, a hundred yards to the south, and is easily recognised by the green fringe of rank grass growing at the edge.

The professional "climbers" were harvesting the Guillemots' eggs, and I am glad to say that these birds are more numerous than ever, probably due to the close season for collecting the eggs now commencing on July 1st. The birds appear to be in nowise discouraged by the taking of some 130,000 eggs each season from about eight miles of cliff in six weeks.

The "climbers" work in parties of four, one going down, while the remaining three lower and haul, and by preconcerted signals on the rope, those above follow the directions of the man below. I found no difficulty in inducing the party that rents this portion of the cliff to lower me to the eyrie.

It was a calm day, and that delightful babel of noise peculiar to a sea-bird's haunt in spring filled the air. Guillemots and Razorbills lined the ledges and Puffins squeezed themselves into the crevices, Kittiwakes selecting the lower sites near the sea.

Far down below, schools of black dots floated and sported on the glassy sea, diving and chasing one another in full enjoyment of the warm calm day. To my surprise, a pair of Rock-Doves dashed out from behind a chimney of rock not 100 feet above the Peregrines' ledge as I was being lowered, apparently in nowise disturbed by the close proximity of their dangerous neighbours.

The Falcons took alarm as the slack rope was let down, chattering noisily as they went out over the sea. A few quick beats, followed by a lightning sweeping curve on outspread wings marked their graceful and more rapid flight among the direct passage of the innumerable Guillemots.

The ledge was indented in the somewhat hollow-faced side of cliff, but gave sufficient room to move in a bent

position. Two of the three eggs had hatched off, and the young birds, in white down, were about three weeks old. As they were some little way from each other, I put out my hand to move one, that I might take a photograph, which he resented by turning on his back, with beak and talons ready for attack. Nest there was no trace of, but feathers and pellets lay around with the remains of Rock- and Stock-Doves and other smaller birds. As the old birds were somewhat uneasy (though they did not approach so close as when the eggs are near hatching), I soon launched myself once more into space and was hauled up, gathering Guillemots' eggs from the ledges on the way. The "climbers" having a practical interest in protecting the young birds, there is every reason to believe that this pair will be successfully reared, and that the Peregrines will not desert the Yorkshire cliffs for many years to come.

# NOTES

## MARKING BIRDS.

WE are very glad to be able to state that the scheme for marking birds with aluminium rings, outlined in our last number, has been well taken up, and we take this opportunity of thanking those of our readers who are helping by putting on the rings and filling up the schedules. We have so far issued nearly 3000 rings of various sizes, and we hope soon to publish some particulars of how they have been used, and meanwhile, as there will still be many young birds about during this month, we would ask those readers who have opportunities for joining in the work to apply for rings and schedules.

EDS.

## REDSTART IN SUSSEX.

IN reply to your correspondent (Mr. J. W. Bond) last month, a Redstart (*Ruticilla phœnicurus*), some fifteen years ago, built in my summer-house here (Netherfield, near Battle), upon a sort of shelf which went round the top of the match-boarded interior, under the heather thatching. I managed to identify the bird, being very uncertain what the four eggs laid were. Their colour was greenish blue, delicately sprinkled with dull red, especially at the base, like a Whinchat's. The bird deserted, and then nested in the cavity of a holly tree, in a field close by, and laid four eggs speckled similarly. In my twenty-one years' residence here I have never seen another pair in Sussex.

E. F. B. MONCK.

## LESSER REDPOLL IN SUSSEX.

MR. WALPOLE BOND writes in the last number of the Lesser Redpoll as being a resident in Sussex. In the Tunbridge Wells district I believe no birds stay throughout the year, for those that nest here all seem to leave about September, and then for some weeks there is scarcely one to be seen—or, it would be better to say, heard. After an interval the winter visitors arrive. The summer residents return at the beginning of April, again after a gap of several weeks from the time when the winter birds leave. This gap was particularly noticeable last autumn, for only a very few birds came for the winter and they were later than usual.

H. G. ALEXANDER.



## RAVENS AS SCAVENGERS.

THE testimony of the eminent naturalist Belon (*circa* 1555), referring to the protection given to Kites and Ravens in the City of London, is well known; and likewise that of Sir Thomas Browne, referring to Norwich (*circa* 1662), as to the "good plentie about the citty which makes so few Kites to be seen hereabout." That Ravens existed in great numbers, and were useful scavengers around London as late as towards the close of the eighteenth century, is manifest from the personal experiences of Robert Smith, who published a work on the destruction of four-footed and winged vermin, and quaintly describes himself as "Late Rat-Catcatcher" to the Princess Amelia.\* As I never remember seeing this author quoted, and as some of his descriptions contain valuable information, and as the book itself is not common, I venture to give Robert Smith's note on the Raven, which shows the rat-catcher was a man of observation. "This is the largest bird that feeds on carrion, and is of a fine shining colour; in some places it is very serviceable, in eating up the stinking flesh or carrion of dead beasts and other carrion, but in many other places very mischievous, and does a great deal of harm, I having been allowed as much per head for killing them as I had for Kites and Hawks, as they are equally pernicious in killing and devouring young rabbits, ducklings and chickens. I know of no better way to catch them, where they become troublesome, than to set two traps for them, in the same manner as you do for the Buzzard [see plate VI., fig. I.], and put a rat between them for a bait, but when you have taken one or two, you must move your traps to another place, or the others will prove too shy to be caught; for as soon as one is taken, great numbers will keep round him, and seeing him fast, will grow suspicious of some danger, and not come near the place any more; but by observing the above method, in moving the traps, I have caught great numbers of them in a day, though it is attended with some labour and trouble. I have often caught the London Ravens near twenty miles from home, in warrens, where they will sometimes come after the young Rabbits; by the London Ravens, I mean those that generally frequent the outskirts of the metropolis, and live upon the filth lying there, grubbing up the dirt in order to get at their food, from whence the tops of their wings become of a nasty, dusky brown colour, occasioned by their wallowing in the dirt, by which means they are easily distinguishable

\* "Universal Directory for destroying Rats, and other kinds of four-footed and winged Vermin." Third Edition. London, 1786.

from the country Ravens, which are black as jet, according to the old saying, *As black as a Raven*. I have seen some of these Ravens sit upon a lamb, that has been dropped weak, not being able to run, when they have got to his head and picked out the creature's eyes while yet alive. Another remark I shall make, which is to point out the difference between the manner of birds of the hawk-kind carrying their prey, and those of the carrion kind. Now, it is observable that Buzzards, Kites, Hawks and Owls constantly carry their prey in their claws, whereas Ravens, Carrion-Crows and Magpies carry their food in their beaks."

H. W. FEILDEN.

#### LITTLE BITTERN IN ORKNEY.

ON May 14th, 1909, a servant of Mr. Scarth, of Binscarth, Orkney, when passing the opening into the sea of the Stennis Loch in Orkney, caught alive an adult male Little Bittern (*Ardeetta minuta*). Mr. Scarth tried to keep the bird alive, but it only lived a few hours. It was sent to Messrs. Small and Son, of Edinburgh, to be stuffed.

There seems to have been only one other specimen recorded in Orkney and that was from Sanday (at Lopness), in 1806.

W. COWAN.

#### SHOVELER NESTING IN STAFFORDSHIRE.

I AM pleased to be able again to report the nesting of a pair of Shovelers (*Spatula clypeata*) in Staffordshire, on a piece of water about a mile from the nest I reported last year (*cf.* Vol. II., p. 95). Eleven eggs were safely hatched out on May 16th. It is very probable that there are one or two other nests in the neighbourhood, as at least two other drakes are to be seen.

W. WELLS BLADEN.

#### TURTLE-DOVE IN SCOTLAND.

A MALE example of the Turtle-Dove (*Turtur communis*), a rare bird in Scotland, was procured at Kelso, Roxburghshire, on May 15th, 1909.

W. A. NICHOLSON.

#### LATE NESTING OF WOODCOCK.

I FLUSHED a Woodcock off her nest on June 8th and found there were four eggs, one of which I took and extracted the young bird—this was in Ross-shire. The nesting of the Woodcock at so late a date is remarkable, and I think it may be worthy of record.

RICHARD H. W. LEACH.

LIKE the Snipe the Woodcock is undoubtedly sometimes double-brooded, and nests have been found considerably later in the season than that recorded by our correspondent. Eggs have been taken in Yorkshire as late as July 14th (T. E. Metcalfe, quoted in *Victoria History of Yorkshire*), while in Ireland the Rev. W. W. Flemyng found a nest with four eggs on July 14th, 1890, in co. Waterford (*Zool.*, 1890, p. 312), and a nest in co. Tipperary had four eggs on July 21st, 1892 (*Field*, May 6th, 1899). This last nest was the second brood of a pair which had young on April 2nd.

F. C. R. J.

#### SNIPE PERCHING.

ON May 31st last I was on a large marsh in Berkshire with Mr. H. M. Wallis. All along one side of this marsh there is a line of large pollard trees, and behind certain of these are placed high hurdles serving as butts for Snipe-driving in the winter. We had reached one end of the marsh, and I was watching several Snipe "drumming" overhead, when one of them suddenly lowered and rounding a pollard tree perched on the top of a hurdle which was placed close by. Mr. Wallis tells me that this is the first time he has ever seen a Snipe actually perching, and, personally, though I have watched Snipe in their breeding haunts fairly closely for some years past I have never seen a similar case.

GWYNNE WITHERINGTON.

THIS, of course, is unusual, but a search through the "Naturalist" columns of the "Field" or "Land and Water" would result in the discovery of many other recorded instances, as it is one of those perennial topics of controversy which recur at intervals every few years. Probably most *Limicoline* birds which breed in wooded districts occasionally adopt this habit, and I have even seen the Curlew perched for several minutes on a pine tree on the heaths of Brabant! The habit is, however, commonest among the *Totani*; the Redshank is very fond of perching on posts or rails, while the arboreal habits of the Sandpipers are well known.

F. C. R. J.

BESIDES the species above mentioned I have noted that Greenshank, Dusky Redshank, Bar-tailed Godwit, Reeve, Common and Wood-Sandpiper and Whimbrel make a habit of perching upon trees and bushes in their breeding grounds.

H. F. W.

## BLACK-TAILED GODWIT IN NORTH WALES.

As the concluding part of Mr. Coburn's note under this head in the June issue of BRITISH BIRDS calls in question the accuracy of the statement in the "Vertebrate Fauna of North Wales," that the Black-tailed Godwit had occurred previously at Barmouth, I would like to reply briefly. In the first place Mr. Coburn misquotes the passage. I did not state that the bird was *noted* by Mr. F. C. Rawlings, but that it was *obtained*. Mr. Rawlings recorded it in the "Zoologist," 1894, p. 334, as "Rare: one procured in August, 1893." In reply to my enquiry for details Mr. Rawlings writes as follows:—"Though I have never shot the Black-tailed Godwit or noted it alive, I saw one in the flesh, and I think skinned and stuffed it for a Mr. ——— on August 11th, 1893." The species is distinctly rare in North Wales, but other examples are recorded in the "Fauna" on the estuaries of the Dee and Dovey, and one in the west of Anglesey.

H. E. FORREST.

LARGE CLUTCHES OF EGGS OF THE GREAT  
CRESTED GREBE.

WITH reference to Mr. Oldham's letter in the June number of BRITISH BIRDS *re* the early nesting of the Great Crested Grebe, the three young he mentions were hatched from a nest, which contained six eggs on April 8th. I waded out to it myself.

This pair now has only two young: what has happened to the third I do not know.

On p. 327 of Vol. I. I noted a nest of Great Crested Grebe containing the unusual number of seven eggs, and suggested that they might have been the product of two female birds. As stated above, I have found a nest containing six eggs this year; I also found a nest containing six eggs on the same reservoir on April 16th, 1908. These three nests were in almost the same place in each of the three consecutive years. I suppose they were the property of the same unusually prolific pair.

The Great Crested Grebe is increasing in numbers on the Weston Turville Reservoir, Herts., every year. I noticed at least five different pairs this year.

L. W. CROUCH.

THE accompanying photograph of a Great Crested Grebe's nest taken in Norfolk is interesting, owing to its containing a clutch of six eggs. These eggs, so far as the keeper could tell, were laid by one bird. The nest itself is rather exposed,

but as the Broad in which it was situated is private, these beautiful birds are unmolested, and last year (1908), eighteen pairs nested there. The second time I visited the Broad the young Grebes were hatching out, and with a pair of



field-glasses I could see the male feeding the female and their firstborn. As only one bad egg remained in the nest I conclude five were safely hatched, and this the keeper confirms.

E. L. TURNER.



# REVIEWS

*The British Warblers—A History, with Problems of their Lives.*  
By H. Eliot Howard, F.Z.S., M.B.O.U. Part III.  
Coloured and Photogravure Plates. (R. H. Porter.) 21s.  
net per part.

WE have already given an appreciative notice (Vol. II., p. 67) of the first two parts of this interesting work. This third part is chiefly concerned with the Blackcap, though two pages each are given to Pallas's Willow-Warbler and Radde's Bush-Warbler. The plates, four of which are in colour, and nine in monochrome, are all by Mr. H. Grönvold, and attain that high standard of excellence which marked the work of the same artist in the first two parts. In our first notice we questioned the wisdom of the author's plan of including the rarer British Warblers only to dismiss them in scanty fashion, so that we need not here consider his treatment of *Phylloscopus proregulus* and *Luscinola schwarzi*. We therefore pass on to Mr. Howard's discussions of the habits of the Blackcap, and it is his detailed descriptions of the habits, and especially the "courting" habits of the birds of which he writes, that make his book so valuable. We find in the account of the habits of the Blackcap ample evidence of the same close and unwearied observation in the field as was shown in the first two parts. As the author has demonstrated is the case with other Warblers, so the male Blackcap generally arrives before the female and occupies a well defined territory, which he holds against all other males. In stating that the male generally pairs with the first female that settles on this territory the author seems to overlook entirely what we have pointed out (Vol. II., p. 67) is a fair assumption, viz., that if the male returns to the same territory year after year then the female does, too, and therefore that migrants may be said to pair for life. We may here suggest that many birds which go in flocks in the winter also pair for life, for after all a flock is very often but a collection of families, and it is only reasonable to suppose that the parents keep together when the flock breaks up in the spring. The mere fact that birds often resort year after year to the same nesting site seems to afford proof that they mate for life. Amongst birds which flock in the winter we have the well-known case quoted by the late Professor Newton (*Dict. of Birds*, p. 553)

of a pair of Blue Titmice using a bottle in a tree as a nesting site for a hundred years, and it may be of interest to record here a case of a migrant species using the same nesting site for certainly sixty years. This was in the village of Burley, Hampshire, where a pair of Wrynecks occupied year after year a hole in a hollow branch of an apple tree in a cottager's garden. One winter the branch was blown down, but John King, the occupant of the cottage, took great pride in his Wrynecks, and bethought himself of the expedient of cutting off the portion of the branch in which the birds nested and fixing a tin roof over one end to keep the hollow weather tight. This natural "nesting box" he placed in the original tree, and when spring came round the Wrynecks took to it at once and continued to nest there for many more years. The end was tragic. King had a spiteful neighbour, who, seemingly from motives of pure jealousy, and knowing the old man's pride in the Wrynecks, one summer about five years ago shot both the old birds. John King is over eighty years of age, and has been a keen observer of nature all his life (he has lived largely by the chase!) and remembers well his father, who had the cottage before him, showing him the Wrynecks many a time when he was a boy. The sitting bird was so tame that it did not in the least mind being handled and was often brought out of the hole to be shown off, while Tits which sometimes took possession of the place were ruthlessly turned out and their nests destroyed before the time of the Wryneck's arrival.

In such a case as this, equally with that of the Blue Tit, the birds must have both returned to the nesting place so long as both survived, and as it is not possible to believe that the same birds lived for fifty or sixty years the surviving partner (both birds of the pair we must presume never died in the same winter) must have brought a new mate, whether male or female, to the old nesting place. Is it not likely, too, that migrants which nest in a particular place year after year, also winter in company with one another. With cases such as the foregoing before us, it does not seem reasonable to suppose that such birds find new mates at each breeding season. In any case, it would appear unsafe to argue, as Mr. Howard does, without due regard to this point as a possible factor. It may account for some of the apparent want of selection on the part of the female Blackcap, for according to Mr. Howard's observations, she takes no notice whatever of the "extravagant bodily actions" of the male, nor is she influenced by his wonderful song, since directly she arrives this is changed as a

result of excessive excitement to high-pitched squealing notes and imitations. Thus neither the female nor the male seem to have any choice; yet again, if this is always so, and if the young return to the home of their birth, how is inbreeding prevented? How does the bird which has never paired choose his ground and his mate? The method cannot be a haphazard one, but to discover how this comes about will be a matter of extreme difficulty, although it may be that the plan of marking birds with rings will help us here.

Mr. Howard considers that he can distinguish the "yearling" Blackcap from the adult in the spring by the browner or less glossy head of the cock, and he has noticed that these birds are not such accomplished singers. Several of his arguments are founded on the assumption that the young are always thus dully coloured, but here he is on treacherous ground, owing to his reliance (apparently) on work in the field only. If a good series of skins of male Blackcaps be examined it will be found that although some young birds have brown or brownish heads in the spring following the year they were hatched, others acquire a glossy black head in their first autumn. The brown on the head is individual and varies in extent, and may very likely be due to a want of vigour. But Mr. Howard is wrong in supposing that glossy black-headed birds are necessarily older than brown-headed ones.

Another point to which we should like to draw attention is the observation that the Blackcap not only carries away the fæces of the young, but that it sometimes swallows them. This we know is a regular habit of the Mistle-Thrush, Song-Thrush and Blackbird, and it would be very interesting if observations regarding it were made upon other species, because as we have suggested elsewhere, it may be of economical importance to the bird which is busy feeding young; the fæces may provide for the old some nourishment that the young, by reason of its exceedingly rapid digestion, has not assimilated.

In conclusion, we heartily recommend Mr. Howard's book, not only as containing the results of much valuable original observation, but as a thoughtful piece of work. We have discussed at some length a few of the points the author has raised, not so much with a view to criticism as to show how much there is of interest in such observations as the author of this work has so perseveringly made.

H. F. W.



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WATER-RAIL: Brooding









WATER RAIL. Female and Chick, call to the shot.



WATER-RAIL: Removing fourth Chick in the Shell.



WATER RAIL: Removing "Added" Egg.

# BRITISH BIRDS

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## A REMARKABLE INCIDENT IN THE LIFE- HISTORY OF THE WATER-RAIL.

BY

E. L. TURNER.

I HAD the Water-Rail (*Rallus aquaticus*) figured here under observation for a month, as I was particularly anxious to secure photographs of the young when fledged. Perhaps the most astonishing fact with regard

to this particular bird is that she *did* hatch off her brood, because both Mr. Farren and I so subjected her to the ordeal by camera that I do not know how long we kept her from the nest between us, but I can answer for three hours on June 16th and again on the 21st. But on June 27th two of the seven eggs showed signs of breaking, and early on the morning of the 28th I went again, hoping to find the chicks out and to secure a photograph of them before they slipped away. However, the female was still brooding, but over five eggs only. Her whole attitude showed intense nervous excitement, which apparently had nothing to do with the proximity of my camera. Almost as soon as I was ready for her the bird came running back to the nest; not with doubtful hesitancy, as on previous occasions, but with an entirely self-absorbed business-like air. During the whole of the first two hours while I watched she incessantly uttered a curious purring noise, exactly like the sound a contented happy squirrel makes when it comes to be petted. This sound seemed to be ventral, and not guttural, for there was absolutely no movement of the throat, only a continuous slight jerking of the tail. Whether running to the nest or brooding this "purring" was unceasing, except when now and again she gave forth the usual "sharming" call note, which her mate would respond to, either by "sharming" or "groaning" whenever he came near; the male bird also "purred." Twice he fed the hen on the nest, but from behind, so that owing to the thick tangle of reeds, I was unable to secure a photograph of the two together. I also heard a faint "cheep, cheep," which led me to suppose he had with him the first newly-hatched chick, though I did not actually see it. Once the male changed places with the female and settled down to brood, but the sharp rattle of my shutter drove him away. I should not have known any difference between the two birds had not they changed places under my eye, when, by a closer observation of the male, I noticed that his bill was

considerably larger, and the upper mandible a much brighter red, than that of the female.

The moment her mate fled the female returned and seizing one of the already chipped eggs she enlarged the hole, as shown in Plate IV., and then contentedly settled down, purring and jerking her tail all the time. I wish to call particular attention to the third photograph (Plate V.), which shows the hen brooding contentedly, a position she maintained for an hour while I watched; because it seems to me that my presence was not sufficient to account for her subsequent extraordinary behaviour. As a rule the Water-Rail is one of the most wary of sitters—more keenly alert and sensitive to the slightest sound than any bird I know; but on this occasion she more than once allowed me to change my plate without disturbing herself in the slightest. The nervous anxiety she *did* display was purely maternal; wrapt in her own meditation, she seemed lost to outside influences. As for me, I was keenly interested and not willing to disturb her; however, seeing the keeper, James Vincent, approaching at the end of the appointed two hours, I dropped the shutter; the Rail did not move till footsteps approached.

I asked Vincent to examine the eggs and report progress. Two of the young were out, and he removed the broken shells. Then the excitement began. The female returned, stood on tip-toe, peeped into the nest, and quick as thought seized one youngster by the neck and carried him off. So rapid and unexpected was this manœuvre that I had barely time to secure my picture (Plate VI.), but the attitude in which she is caught shows to advantage the real elegance of the Water-Rail, for on the nest she fluffs herself out and looks twice her natural size, whereas she is really slim and dainty. No sooner had I changed my plate than she was back again, and this time seized the second unfortunate and bedraggled-looking chick by the head, and whisked him off (Plate VII.). She then returned for the third, not

yet out of the shell, and seizing him by the shoulder removed him shell and all (Plate VIII.), and the fourth also in like manner (Plate IX.). There remained only one addled egg, but though this formed a very difficult task, after several unsuccessful efforts she succeeded in getting a firm grasp of it (Plate X.), and disappeared. All these five photographs were taken in less than ten minutes.

After this the bird returned twice and just peeped into the nest, and, thus apparently satisfied as to its emptiness, we saw her no more.

We diligently searched the reeds for the missing birds, but found only the addled egg, some eight feet away, and one half-fledged chick, that must have been in the water many hours, evidently one of those removed from the nest on the 27th. We replaced the egg, covered up the nest and went away, hoping that, like the Great Crested Grebe and Coot, the Water-Rail would bring back her young to the old home for a day or two; but on the 29th the nest was wet and cold, evidently there had been no return; and though we made a long search in its vicinity, no trace of the birds, old or young, could be found.

I can give no explanation of the cause of this behaviour on the part of my Water-Rail, and do not know whether it is ordinary or extraordinary; the fact that two young ones disappeared before the 28th seems to show that these birds are in the habit of removing their newly-hatched or partly-fledged young. This is a story without an ending, because so far we have failed to discover the whereabouts of the missing birds. Perhaps another season, by carefully watching and not attempting to photograph the Water-Rail, some further light may be thrown upon this very interesting point. After all, this bird is my "totem" and ought to reveal her secrets to me.



OBSERVATIONS ON THE MIGRATION OF BIRDS  
IN THE MEDITERRANEAN.

BY

COMMANDER H. LYNES, R.N., M.B.O.U.

I.—AUTUMN MIGRATION AT AND AROUND PORT SAID.

*(Continued from page 51.)**E. Height.*

TRAVELLING birds—I mean those whose evident intentions were to proceed and not to alight—were never seen either near the land or at sea; and in the harbour, all arriving birds seemed to be in a state preparatory to alighting, either flying in quite low like the Quails, which rose from just above the surface of the water, only to clear the houses and shipping; or dropping down from what may have been a good height, slowly making for cover as indicated by an uncertainty in direction.

On the sea near the land, birds seen were almost invariably quite close to the water's surface, a matter of a few feet only. It is, however, a significant fact that outside of a radius of about ten miles from land, whether in Egyptian or other waters, no birds ever came near the ship (except such as appeared to have lost their bearings) whose appearance could not be directly ascribed to some untoward event such as wind or rain, and on these occasions they would fly around, follow, or alight on board the ship.

This only bears out what is doubtless another generally accepted fact, viz., that sea passages, if not also land passages, are at any rate in the majority of cases, carried out at a height at least above the normal limit of human vision, and that a descent is only made when the bird intends to alight.

The position relative to the Egyptian sea-shore, at which the descent is made, appears to vary with the species. Quails seem always to arrive at the coast-line only a few feet above the surface of the water. I have also a few somewhat similar notes for the Corn-Crake,

Water-Rail and Spotted Crake, but the small birds seemed to appear suddenly from nowhere as if they had dropped down rapidly from a height. On the evening of September 6th I went over to the Navy House courtyard to see whether there were any Nightingales in the trees there. A careful examination of the two largest trees whose middle boughs swept the balcony revealed only one Nightingale, although there were plenty of other birds there. Toward sunset I suddenly became aware that there were more Nightingales, quite a number in fact, and I shot two Sprössers and one common Nightingale for specimens. Although the trees had been closely watched the whole time, these arrivals had escaped notice, which could scarcely have been the case had the birds approached from anywhere near the horizontal, hence the conclusion that they had dropped in almost vertically.

Such a conclusion may seem rather far-fetched, but it is nevertheless an undoubted fact that birds can and do sometimes make downward swoops of very great rapidity. This may be seen on a winter's evening in London by watching the Starlings coming in to roost in the big poplar trees in St. James's Park. One's attention is first drawn to the sudden appearance in the tree-tops of the first party of Starlings, which proceed to settle down in their night quarters with the noisy chatter characteristic of the species. Stop near the trees, and you cannot fail to be aware both by eye and ear that the numbers of birds are increasing every few minutes, and yet no more have actually been seen coming in. Now move two or three hundred yards away from the trees, and careful watching will reveal a party of Starlings, high in the air, coming from the northward. They look as if they are going to take no interest in our poplar trees, as they seem to continue their flight until they are right over them. Suddenly there is a check, and down, almost vertically, they come hurtling through the air, growing from a speck to a Starling with such marvellous rapidity

that one feels at a loss to say exactly how it has all been done.

With regard to departures of birds at Port Said all I ever noticed was a restless movement in a southerly direction in the evenings. As already described the birds were from twenty to a hundred and fifty feet high, but I have little doubt that if particular attention had been paid to the point, some of them might have been noticed mounting to their passage altitude during the short Egyptian twilight.

#### *F. Speed.*

The only passage speeds I was able to deal with were those of some of the species which arrived flying low. The best observations were made on the Quails by timing them from the moment they crossed the fore and aft line of the ship to the moment that, with a pair of glasses, they could be seen to fly into a Quail net exactly 500 yards distant.

The result gave a speed of just fifty knots an hour. Corn-Crakes, Water-Rails and Spotted Crakes arriving appeared to be going just about the same speed, but proper time-observations of them were never obtained. No matter whether at the sea-shore or in the harbour, the speed of these particular birds as they came in never appeared to be appreciably different, but whether it was that at which the whole passage across the sea had actually been made is, of course, impossible to say.

I question much, however, whether these and like species of birds that possess a continuous whirring flight on migration are capable of any but a very limited increase of their ordinary speed on the horizontal, or of much diminution of it without intervals of "soaring." On downward grades, no doubt, almost any speed is possible, but this cannot apply to long distance flight. In a ship, an increase of a few knots on the normal speed requires a disproportionately high relative increase of

horse-power, and it seems rather unnatural to expect a bird's flight-mechanism to be capable of such analogous expansion of power, since it would be the reverse of economical to maintain a similar reserve of power.

Consider mankind—there is scarcely 20 per cent. difference between the "record" and the general average speed in any foot race.

#### *G. Age of First Arrivals.*

With regard to the much debated question of whether some of the adults of each species do or do not lead the way as pioneers of the migrant waves, I can only say that, with the exception of the Redstart and Wheatear, every species sufficiently well represented to enable a conclusion to be arrived at, appeared to have some adults among the first batch of arrivals, and this was actually proved by obtaining specimens in the majority of cases. There may, perhaps, have been adult females among the Redstarts and Wheatears, but their appearance was not sufficiently distinctive to enable me to separate them from the young birds.

With so many individuals of other species migrating from (probably) the same breeding areas, and bound in the same direction, it seems rather natural to suppose that young birds may not always consider it necessary to have one of their own species as a guide, but may, on the contrary, join up with birds of other species—a supposition which is of course supported by the frequent appearance of heterogeneous assemblages of species during migration time.

#### *H. Habits.*

Since space naturally precludes a separate description of the habits of each species, I shall endeavour under this heading to describe, in more or less general terms, only such habits as the act of migrating seemed to have imposed upon the birds passing through Port Said. Firstly, there was the desire for seclusion on alighting,

and there is little doubt that fatigue resulting from the passage across the Mediterranean was its direct cause, since it was rest, and not food, that was first taken. Just as on our own eastern sea coast the autumnal North Sea migrants are to be sought during the day in the thickest bushes, tufts of grass, bean fields, and other cover—or as Gaetke in Heligoland found them in the scanty bushes and potato fields of that island, so at Port Said the birds of passage, on alighting, took possession of the bushes, trees, and thickest cover they could find, and when such-like natural cover was insufficient to cope with the influx of the migrants then they overflowed into all sorts of odd places like hotel verandahs, or on board the shipping in the harbour. Under the latter circumstances each species seemed to do its best to select something more or less corresponding to its own natural environment.

Thus, on board the "Venus" in the harbour, the Water-Rail flew into the officers' smoking room through the open scuttle; the Corn-Crake and Quail would alight on the quarterdeck and after a nervous glance around dive hastily behind a six-inch gun; the Nightjar would fly silently about the "bosky glade" formed by the funnels and boats' davits, resting now and then on a skid-beam as being the nearest approach to a bough; while the Willow-Wrens and other small warblers would perch on the masts, yards and rigging. Ashore, the Redstarts might be found in hundreds among the piles of scrap iron in the docks, and Golden Orioles in the little trees on the Bund crowded with people, while a heap of old tin pots and kettles or a roll of barbed wire in the extension works was a quite likely hold for a Quail.

Naturally, this characteristic was not without its exceptions, for instance, one evening we saw a Corn-Crake perched in the topmost foliage of a sixty-foot Aleppo pine tree, and other like incongruities were noticed from time to time.

Song, during the whole of the most important period

of migration, was entirely absent. The nearest approach to song, and the only example I ever met with during August, September, and practically all October, was that of a Nightingale, one of several in the Navy House trees, that I was watching, in the early morning of 26th August. This bird uttered a few of its liquid notes—but they were but an echo of the Nightingale's true song. Probably my presence a few yards away was the cause of this little outburst, which it struck me corresponded to the nervous song that warblers often utter when they first find an intruder at their nest. The other Nightingales in the tree were also uneasy at my proximity, but only showed it by making low croaks and agitated movements of the tail.

Bluethroats, of which species the first representatives appeared in mid-October, were not heard to sing until after the beginning of November, and then only occasionally, and not well.

Robins were first heard to sing in December, although the arrival of the species dated from the latter part of October, and the Chiffchaff, whose passage had begun in mid-October, was heard to sing on one occasion only—the early morning of the 4th December. Curiously, this was a dull, still morning, and it was quite a surprise to hear not one, but several Chiffchaffs singing away for a few moments (only) as if it were June in England.

I can record only one other species as having sung at all—a Reed-Warbler—which came out on to the end of a tamarisk spray and gave forth a rapid, but clear, jumble of notes. This was on October 27th, the migration of the species having commenced in August; and a few of its representatives (of which this was very likely one), remained to winter in the district.

Even in winter the Song-Thrush did not appear to sing, and the Cuckoo, Golden Oriole, Hoopoe, Corn-Crake, and other species with striking "song-calls" alike went by in absolute silence.

In the British Islands as we all know, some species sing

in winter as well as in the breeding time (*vide* also Messrs. Alexanders' *Song-periods*, BRITISH BIRDS, Vol. I., pp. 367-372), and if, in non-migratory birds which habitually sing in the winter, it is the moult that causes the cessation of song in the autumn, then in migratory birds the passage itself would seem to be the governing factor, since in such species it is reasonable to suppose that no extensive migratory flight could be successfully undertaken by a bird moulting any of the more important parts of its plumage, a supposition which is supported by the specimens obtained at Port Said during the period in question.

So far as migration goes, therefore, it would appear that under such conditions as governed the process in the Port Said district, bird-song had no existence whatever, the isolated records during the migration period showing every probability of having come from individuals which had already settled down in the quarters in which they proposed to spend the winter. It would have been interesting to have discovered whether any of these songsters were young birds of the year—but though alive to the desirability of such an investigation I was unable to procure any satisfactory data.

Feeding, generally speaking, seemed to take place towards the close of the day, after the hours of rest. Small insects, such as mosquitoes, were available for the lesser insectivorous birds in great abundance in the evenings and probably also well into the night; since great swarms of insects are frequently attracted to the navigation searchlights used by ships passing through the Suez Canal in the dark. Thus, the feeding time of these soft-billed little birds was mainly about sunset.

The Shrikes seemed to feed considerably earlier, and by 2 or 3 p.m. became conspicuous by taking up points of 'vantage on posts, telegraph wires and bush tops, and their prey being the larger ground and day-flying insects, such as grasshoppers, this would seem quite natural. I never saw the Shrikes molest small birds in any way, in spite of the fact that they were constantly sitting

among quantities of tired little Willow-Wrens and other small birds, but a resident told me that in the previous autumn he had seen a Red-backed Shrike take and eat a small bird, in one of the trees in his "patio."

We had several instances both in Port Said and at sea off the Egyptian coast, of birds on flight striking the rigging, all in daylight. One can readily understand such a thing occurring in the dark, but when one considers the wonderful command of wing that must be possessed by birds like Starlings, Ducks, Waders, etc., which fly and turn with great rapidity in close formation without ever colliding—the inability of these migrating birds to avoid the ropes suggests diminution of wing power arising from fatigue as being the cause. True the birds damaging themselves thus were mostly Quail, but we had other species as well—a Willow-Wren and a Whitethroat for instance.

In the early morning of November 3rd I liberated a Sky-Lark, caught by the wing in spiders' webs among tall bulrushes, and in the afternoon of November 8th I found a Sky-Lark fluttering along the ground a few miles south of Port Said, with one scapular broken, and a very badly bruised head—evidently by a collision—as the skin was intact.

In considering to what extent the gregarious habit was affected by the various species passing through Port Said I have been chiefly influenced by observations made during the halt in the day-time; owing, it must be admitted, to lack of sufficient data during the flight.

Certain groups, such as Larks and Finches, undoubtedly both arrived and halted in parties, not necessarily of the same species, but I cannot be sure that the Turtle-Doves and Shrikes, which seemed to rest and feed in scattered bands, actually travelled in like manner; on the contrary, I am under the impression that, in their case, one or two at a time was more usual on flight, and that a mixture of species travelling in company was the exception, rather than the rule.



Then again, the larger insectivorous species would naturally find it more lucrative to disperse in order to obtain their grasshoppers and beetles, while the seed-eaters would be more likely to find enough food for their whole party in a small patch, where a particular kind of plant flourished in a suitable stage for consumption. Species that appeared always solitary, whether flying in, resting or feeding, were the Grey Wagtail, Nightjar, Hoopoe, Cuckoo, Quail, Corn-Crake, Water-Rail and Spotted Crake and some of the *Raptors*.

Some of these solitary birds were, of course, young of the year, presenting the old difficulty of explaining how such individuals could find the way to their winter quarters, along a route they had never traversed before. When it is remembered, however, that these observations only concern one of the breaks in the journey and that all passage flight was probably carried out at a height beyond human vision, the fact of certain species flying in to alight, resting and feeding singly at Port Said is not wholly antagonistic to the theory that these birds are guided by old birds of their own or other species travelling along the same route.

Species resting and feeding in more or less scattered bands, one, two, or even more, in each bush of a particular area, but with little, if any, concerted action, were Wheatears, Whinchats, Redstarts, Shrikes, and Golden Orioles. Turtle-Doves were not uncommonly in twos. The majority of species rested and fed in parties, composed of one or a few family parties, if one may judge from the proportion of adults and young birds. The masses of warblers seen on certain occasions, I am sure, had no concerted action as a whole, but simply represented the accumulation of numbers of smaller parties in a confined area. I think that about fifty was the maximum number of birds we saw in any "organised" party, the species being Blue-headed Yellow Wagtails, Sky-Larks, and perhaps Linnets.



# NOTES

## THE LONGEVITY OF BIRDS.

IN your review of Mr. H. Eliot Howard's book I notice that you say (*supra*, p. 63) that it is not possible to believe that Wrynecks live for fifty to sixty years. May I ask why? Given that a bird lives in perfectly natural conditions and never suffers from want of food or from excessive cold, what proof have we of the length of its life?

It is well known that a great many birds die on migration, many more die from starvation due to excessive cold and sudden deprivation of food, but of the length of life of such bud and seed-eating birds as Bullfinches, Goldfinches, Yellow Buntings, etc., living in a temperate climate we know but little.

I think one may assume that the life of a pinioned or caged bird would probably be shorter than that of one living under natural conditions, *where its food supply never failed*, and yet the following instances of longevity amongst birds have occurred amongst those in my own collection.

A Barbary Dove which has been in my possession for fifteen years was left me by an old woman who also owned it for fifteen years and who always told me that it was an old bird when it was given to her. It shows no sign of old age unless it be that the innumerable eggs laid by the young hen bird which lives with it are always infertile.

The second case is that of a Chinese Goose which has been in the possession of the family for fifty-seven years.

The third is a Pintail Drake which I bought twenty years ago and which was then an adult bird.

It is well known that Eagles live to a great age. A few years ago we had in our possession the last of the White-tailed Eagles bred in Galloway. The bird was taken from the nest in 1852 and died in 1900. It was chained by the leg to a small hutch and lived forty-eight years under these miserable conditions.

The Wryneck is dependent upon insect food but it leaves us early, and there is no reason why its food supply should fail.

M. BEDFORD.

[The whole subject of the age to which birds live is one about which we are profoundly ignorant and the only positive facts we have concern the ages to which certain captive

birds have attained. Of these even we have comparatively few reliable records, and the instances of longevity noted above by the Duchess of Bedford are therefore most welcome. Attention must here be drawn to a valuable article on the subject by Mr. J. H. Gurney, published in the "Ibis" for 1899 (pp. 19-42). In his researches Mr. Gurney found some remarkable records such as a Raven of 69, Parrots of 80, Eagle-Owl of nearly 70, Condor of 52, Eagles of 55 and 56, Heron of 60, Goose of 80, Swan of 70, Collared Dove of 40, and so on, but of the small Passerine and Picarian birds 25 years seems the maximum, and that has only been reached in a very few cases.

We have practically no positive evidence as to the length of life of the wild bird, and I do not think we can argue from instances of longevity in captive birds, which are so kept that the supply of food is unailing and all enemies and accidents are carefully guarded against. There is perhaps little doubt that members of certain families, such as *Corvidæ*, *Falconidæ*, and *Anatidæ* live longer than birds of other families, but I do not believe that the average life of any species, of which a pair would raise a minimum of say four young each year, can be longer than a few years. If the normal life were much longer, even after taking into account the probable great mortality of the young, I imagine that birds which rear four and more young in a season would literally be swarming in the course of a few years.

Then in the case of a migrant such as the Wryneck, imagine what an individual would have to go through in the course of sixty years: How many miles in all would it journey? How many storms and fogs might it be expected to encounter at sea? How many times would it have to steer clear of the fatal lighthouse or lightship? How many Hawks and Gulls, how many guns and snares would it avoid? I said that it was impossible to believe that the same birds (*i.e.*, the same pair) lived for fifty or sixty years, but I would say now that I cannot believe that any Wryneck could escape for fifty years the manifold dangers to which it would of necessity be exposed.—H. F. W.]

#### WINTER HABITS OF THE BLACKCAP AND MATING FOR LIFE.

WITH reference to your remarks on the Blackcap in your review of Mr. Howard's book on the Warblers, and the likelihood of its pairing for life, it may be worth while stating that during last winter, which I spent on the Riviera, I repeatedly

saw male and female Blackcaps in company. Doubtless these birds, and many others, mate for life, or at any rate for long periods. The *length* of their partnership will, apart from accidents, depend on the degree of "faithfulness" which either bird exhibits for the other, and this faithfulness will naturally depend on the degree of continued fascination which either bird can command over the other. Their charms will, therefore, not necessarily be limited to the breeding season. For instance, on the Riviera last winter Blackcaps were in *full song during the whole of the winter months*. From October until June, when I left for England, this song continued uninterruptedly every day through one of the coldest winters which has been experienced on the Riviera for years. My diary contains several notes to this effect: *e.g.*, "Nov. 23rd. Still more Blackcaps in the garden. They sing all the morning, especially when it is warm and raining." "Dec. 1st. Blackcaps singing here every morning to the full extent of their powers." "Dec. 25th. Blackcaps still in full song." What then were these Blackcaps singing for? Surely we may presume that it was to convince the hen bird what fine fellows they still were, and to prevent her running off with some other male. Resident birds do not breed until April.

Chiffchaffs also sang throughout the winter. Their song consisted for the most part of *four* notes, and could be rendered—chiff-chiff-chaff-chiff, the second note rising high.

With regard to the "high-pitched squealing notes" you refer to as uttered by the male Blackcap during the breeding season on the arrival of the female, the following extract from my diary while at Madeira in December, 1905, may be interesting in reference to the great difference in the time of the breeding season between the Madeira and the European bird:—

"December 20th. The public gardens are swarming with Blackcaps (*S. atricapilla obscura*). They were flying about among the magnolias, hibiscus and tree begonias. Besides the ordinary harsh, grating, alarm note, the air was full of their peculiar squeaking, half whining plaintive calls, evidently a sign of the approaching nesting season."

During my stay I obtained a living example of the peculiar melanistic variety of the Madeira Blackcap (*S. heinekeni*). We kept this bird alive for nearly two years, and it sang, except when moulting, practically continuously throughout the year. Its song differed from the usual one of the Blackcap by beginning with an exceedingly sweet and low *gazouillement*,

and ending with a burst of high-pitched, very clear and distinct, fluty notes. During two visits to the Azores I found several clutches of eggs of the Blackcap towards quite the end of May (*e.g.*, May 29th), and I believe the time of nesting of the Azorean Blackcap to be very much the same as ours, if anything a little later.

In connection with the remarks you make as to the well-known fact of birds resorting year after year to the same nesting site, it may also be of interest to state that a pair of Pied Wagtails have nested yearly within a yard or two of the same spot in some ivy surrounding the billiard-room of a house near Windsor for the last eighteen or nineteen years.

For the last seven years I can vouch for this myself, and, in addition, have seen and handled during these seven years three young Cuckoos which have been reared by them; one in 1903, one in 1904, and the last this summer. It is quite possible that during these seven years there may have been other Cuckoos' eggs laid or hatched, as for two or three years I unfortunately did not take the trouble to examine the nest.

Here then we have almost certain evidence of the *same* "branch" of this Wagtail family occupying the same nesting site, but, in addition, it seems highly probable that the *same* Cuckoo or its descendants remained faithful to it in so far as they probably returned yearly to visit the nest.

PERCY R. LOWE.

#### LARGE BROOD OF REED-WARBLEDERS.

ON June 12th a friend and I found a Reed-Warbler's (*A. streperus*) nest containing *six* young, built amongst dead reeds in a dyke near Southminster. Five is an uncommon clutch, and I have never seen or heard of six before.

D. H. MEARES.

[Clutches of six eggs are very rare in the case of the Reed-Warbler, which generally lays four, occasionally five eggs. I took one on June 20th, 1907, at Sudbury, Derbyshire, but have never found another. Mr. F. Norgate, however, told me that he once took a clutch of six, and I have seen one or two reputed sets in other collections.—F. C. R. J.]

#### ARRIVAL OF MARTINS AT THEIR BREEDING HAUNTS.

I WAS struck during the latter end of May by the absence in this village (Hemel Hempstead) of the House Martins (*Chelidon urbica*), which usually breed in some numbers on

the houses bordering the high road. Having satisfied myself that none were about on the 25th of May, I visited a farmhouse about a quarter of a mile down the road, where there are usually twenty nests or more, and to my surprise found a fair number of pairs with nests in all stages of building. Subsequently I kept a sharp look-out round my immediate neighbourhood, but never saw a bird until the 14th of June, since when a fair number have appeared, and I have now, 22nd of June, three completed nests on my own house. Several possibilities to account for this occur to me, but none are completely satisfactory, and so they are best left unpublished; but a difference of at least three weeks in the arrival of a species at two breeding haunts within a quarter of a mile of each other and under precisely similar climatic conditions is, I think, worthy of record.

J. LEWIS BONHOTE.

#### PAPER USED AS NESTING MATERIAL BY LESSER REDPOLL.

LAST year I found in a birch tree at Hampstead a nest of the Lesser Redpoll (*Linota rufescens*) into the exterior of which a number of strips of white paper, collected from some lying under the tree, had been worked; the nest was thus made very conspicuous, which otherwise would not have been the case, as it was high up in the fork of the tree.

H. MEYRICK.

#### CROSSBILLS IN SCOTLAND AND ENGLAND.

THE visits of the Crossbill to Orkney seem to be sufficiently infrequent to be worth recording. On June 29th last I noticed a single bird in a row of stunted sycamores in the garden at Græmeshall, in the S.E. mainland, and on the following morning there were two others. All three were immature birds with striped breasts, and appeared to be feeding on the seeds of some weed which they procured in the long grass, afterwards flying to the sycamores in order to eat them. I saw them again on July 1st, but after that they appear to have passed on. I may add that the wind was blowing from the N.E. from the 27th to 30th June, and changed to S.E. on July 1st. The trees above mentioned are practically the only ones in the S.E. of the island, and so afforded the only resting place for these birds on their arrival. It will be interesting to see if these individuals were part of an extensive immigration of Crossbills into the British Isles,

such as is sometimes known to occur in July, and if this should prove to be the case, this note may be of some assistance in tracing the origin of these migrants and the route they have followed.

N. F. TICEHURST.

At the end of June or beginning of July there was an irruption of Crossbills into Shetland. The first I saw was on July 2nd, but they had been seen some days previously. I afterwards saw scattered individuals and small flocks in Fell and Mainland, and I heard of them on all sides. There were old birds of both sexes and many young, and all seemed in great straits for food, many being in a starving condition.

On reaching Hever, near Edenbridge, Kent, early on the morning of July 15th, a flock flew over me, and I have seen many since, and one flock of at least one hundred birds. My woodman tells me to-day (July 20th) that he has seen many for some time.

E. G. B. MEADE-WALDO.

[We also hear from Mr. W. S. Medlicott that he saw a flock of about twenty Crossbills near Botley, Hampshire, on July 4th, and Mr. Eric Lacey writes us from Crow Hill, near Ringwood, Hants., that from sixteen to twenty arrived there on July 4th, and Mr. C. J. Wilson tells us that they have been numerous near Godalming in Surrey during July. In the "Field" of July 10th, Mr. W. P. Green writes that about a dozen were seen near Romsey, Hants., "last week." We also learn from the "Scotsman" of July 12th, that a small flock was seen on Sanday, Orkney, about July 5th, and a good many were seen between that date and July 10th near Kirkwall, while Mr. A. G. Gavin writes to the "Standard" of July 21st that some were seen at Fraserburgh. It is a pity that dates have not been recorded with sufficient exactness in some cases.—EDS.]

#### CURIOUS SITE FOR A STARLING'S NEST.

A BARRIER of the safety range at Haileybury is made of loose flint pebbles, encased in wood. A Starling (*Sturnus vulgaris*) has found a crack in the wood casing at the top of this barrier, and has entered by this and removed a number of the flints, so as to make room for a nest. Curiously enough the bird has flown several yards with many of the stones, and has deposited them upon a ledge. The expenditure of so much labour in providing a nesting site would seem to indicate that the more usual breeding places of the Starling were becoming exhausted.

F. W. HEADLEY.

## RAVENS AS SCAVENGERS.

UNDER this heading (p. 57) Col. Feilden makes some remarks on the former abundance of Ravens in and around London, and their utility as scavengers, quoting Robert Smith's "Universal Directory for Destroying Rats and other Vermin," third edition, 1786. He says: "As I never remember seeing this author quoted, and as some of his descriptions contain valuable information, and as the book itself is not common, I venture to give his note on the Raven." It may therefore interest him and others to know that I mentioned this book and quoted the passage about London Ravens more than five and twenty years ago in an article "On the Feræ Naturæ of the London Parks," published in my "Essays on Sport and Natural History," 1883. The first edition of Robert Smith's "Directory" was printed in 1768.

J. E. HARTING.

## LITTLE OWL BREEDING IN DERBYSHIRE.

ON May 2nd, 1909, I discovered a clutch of six Owl's eggs in the hollow interior of a tree in Derbyshire. They seemed to be slightly incubated, and though certainly belonging to an Owl, they appeared very small. Neither bird was to be seen, but twenty or more fresh-killed mice were scattered about the interior together with a few feathers, apparently of Finches.

On revisiting the place a week later, all doubt as to the species was set at rest by finding a Little Owl (*Athene noctua*) sitting tight upon the eggs. She was fully awake, with wide-opened yellow eyes, but refused to leave the eggs, and might have been taken in the hand. Most of the mice had been eaten, presumably by the sitting bird.

On June 6th four young had been hatched, ashy-grey in colour. Every scrap of food was now gone, and the nesting cavity was rapidly assuming a very unsavoury condition. On the 13th the young were considerably grown, and varied slightly in size and general development, the oldest giving short sharp snaps to indicate his resentment at interference. By the end of June the young were well feathered and taking short flights, though they still used the nest for roosting, etc.

I have every reason to believe the birds got safely away. This being, so far as I am aware, the first record of the Little Owl nesting in the county, their success is gratifying, and it is to be hoped that the species will become an addition to the regular Derbyshire breeding list.

C. H. WELLS.



THE PEREGRINE FALCON ON THE YORKSHIRE  
CLIFFS.

ALLOW me to offer a few comments on Mr. A. D. Sapsworth's article in your July number. Mr. Sapsworth's remarks seem to leave room for a doubt as to the Peregrine Falcon's not breeding in 1904. The birds, male and female, were seen at Speeton Cliff on 24th April, 1904, by Mr. T. Andas, near the place known as Old Man's Head. On the Saturday following Mr. Andas and myself passed the same place, but as no birds were then about, and as no more were seen again that year up to at any rate the end of the climbing season, there can be no room for doubt that they did not remain to breed, as all the range of cliff is climbed for eggs of Guillemots, and if the Falcons were there they would not be long in letting everyone know of their presence.

Again, as regards the height of the cliff at Falcon's Nest, where they bred in 1908 and 1909, the climbing ropes used by the Hodgsons, which are the longest in use at any part of the cliffs, are made 95 yards long only, and reach to within about 15 yards of the bottom at this point, so that 330 feet is nearer the height than the 400 feet stated. In fact there is no sheer cliff 400 feet high even at Speeton where the greatest height is reached, the bank of glacial drift which caps the chalk above the precipice hardly rising to this height above sea-level. The eyrie is as nearly 200 feet from the top as possible, and this is about two-thirds of the way down. The photograph of "The Dorr" as the Falcons' breeding place in 1906 and 1907 is misleading. The actual place is east of the view shown, at a climb called Black Hole, quite invisible from the top of the cliff, and in 1907 the birds had shifted a few yards west of their 1906 breeding ground. H. Marr, on whose climbing the birds were, has always maintained that two young only were reared in each year.

E. W. WADE.

THE article on the Peregrine Falcon on the Yorkshire Cliffs (*supra*, p. 52) omits reference to a pair which nested at Redcliff, between Scarborough and Filey, in the spring of 1901. Four eggs were laid, which were plainly visible through glasses from the cliff top, and four young ones were safely reared. One of the adults was shot in the following September, and an immature bird, possibly belonging to this brood, was killed at Filey about the same time. The following year a pair of Falcons returned to the same place and nested, the

eggs being taken and one of the old birds shot, after which the survivor deserted the site.

W. J. CLARKE.

### MIGRATION ROUTES OF WHITE STORKS.

IN a leaflet which has just been issued from the Vogelwarte at Rossitten, Dr. Thienemann gives particulars of two marked Storks recaptured in Africa within the last few months, and summarises all his returns from that continent, of Storks marked as nestlings in East Prussia and neighbouring provinces. The six African localities of recapture, and the locality of a Syrian recapture recorded at the same time, are, from north to south, as follows:—Karietein, 65 miles north-east of Damascus; Lake Fittri (eastwards from Lake Chad); Roseires, on the Blue Nile, Soudan; Fort Jameson, North-eastern Rhodesia; Kalahari Desert; Moriija, Basutoland; and Quthing, Basutoland. The available information as to dates of recapture is in most cases of the vaguest. It will be seen that the localities are fairly well distributed along the route, or routes, which they begin to mark out. The record from Lake Fittri, almost in the same latitude as Roseires, but 1150 miles further west, is suggestive. No mention of European returns is made, but it is interesting to note that Herr Mortensen's Storks marked at Viborg and in Brandenburg, follow a south-easterly course through Germany and Hungary towards Asia Minor, in contrast to his marked birds of other species, which take the more usual south-westerly direction.

A. LANDBOROUGH THOMSON.

### RED GROUSE, HEATHER, AND CROWBERRY.

IT is impossible to read any account of the natural history of the Red Grouse without coming across the statement, either explicit or implied, that the bird cannot exist without heather—a term that may be used to include the true heather or ling (*Calluna vulgaris*), and the two common heaths (*Erica Tetralix* and *E. cinerea*). So high an authority as the late Professor A. Newton stated that “the Red Grouse indeed is rarely or never found away from the heather on which it subsists, and with which it is in most men's minds associated.” So far as I have been able to learn, this is the opinion held by every British ornithological writer who has treated of the bird, and by all sportsmen and gamekeepers. But the Red Grouse is abundant on certain moors in Lancashire and Yorkshire where the heather is absolutely unknown.

During the last year or so I have made several "surveys" of the moorlands that lie (roughly speaking) between Manchester and Huddersfield, and have more than once walked for miles and seen many scores of Grouse without meeting with a single plant belonging to the order *Ericaceae*. The plant that is called ling by all the sportsmen and keepers on these moors is the crowberry (*Empetrum nigrum*); true ling, when it does occur, is called "heather," and the heaths are called "bell heathers."

In the earlier months of the present year I made a thorough search over some five or six square miles of a particular series of Grouse moors without seeing a solitary plant of either heather or heath. Yet Grouse were numerous, and I saw several nests during my later visits. Where heather and crowberry grow side by side, as they do on some moors, it is easy to persuade anybody that they have been wrong in their botany; but the task is naturally harder where the real heather happens to be altogether replaced by crowberry. One experienced keeper refused to listen when I suggested that he had not a plant of heather on his moor, and I rather think that this will be the mental attitude of many another person. The vegetation of these moors has been made the subject of an elaborate memoir by two authors (Smith and Moss, *Geographical Distribution of Vegetation in Yorkshire, Geographical Journal*, April, 1903), who have quite omitted to refer to the absence of heather from many hundreds of acres of the moorlands they write about. It is hardly necessary for me to add that no hint of this state of affairs appears in the writings of any of our North Country naturalists. I have spent many hours, at every season of the year, on Grouse moors in both Wales and Scotland; but as my interest in the food of the bird is very recent, I cannot speak with any confidence of the heather on moors other than those I have lately visited in Lancashire, Cheshire and Yorkshire. So far as I can gather real Grouse disease is altogether unknown on these heather-less moors: the discussion of the subject with the keepers soon makes this evident; and it is rather interesting to read that this happy state obtains on many moors in the West of Scotland, a part of the world where the crowberry (*vide* many Scottish "Floræ") appears to be common. There may be something in this, for, without going too far into the botany of the subject, I may say that I have never yet found the crowberry growing anywhere except on more or less pure peat, a soil that supports a peculiar flora, and, presumably, a correspondingly peculiar fauna.

I now make the suggestion that everyone, no matter how confident he may be of his ability to identify "heather," should submit specimens to some competent botanist. Crowberry bears its inconspicuous flowers in April or May; but heather, as everyone knows, blooms in late summer, and its flowers are very striking. *All heather that is not in bloom in July or August should be looked upon as crowberry until the contrary is proved.*

Sometimes, as on certain tracts of the district I now write about, heather and crowberry grow side by side. But heather is always more or less local here, and I cannot see that ground where it does grow holds more Grouse than those parts where it is quite non-existent. It is hardly strange that the two plants have been for so long confounded by sportsmen and zoologists, for the resemblance between them is very great. Botanically, they are in no way related. Although it is said that the easily recognisable leaves of the crowberry have been detected in the stomachs of Grouse, I have never seen any marks of the birds on the actual plants. The berries, of course, are eaten with avidity; but as the species is dioecious, and the staminate plants are apparently the most numerous, a given area of crowberry may not produce much fruit.

One need not here go any deeper into the subject. It must suffice if I point out that on great tracts of the Pennine moors Grouse are abundant and heather does not and cannot grow; and I think that the same conditions prevail on moors in other parts of Great Britain. Of course I am well aware that Grouse are common on land where true heather is the dominant plant, and where the crowberry does not occur. But it is a mistake to hold the ancient belief that the Red Grouse cannot exist (and *probably* free from disease) on ground where heather is not found. I can hardly be as explicit as I should wish in the way of naming localities; but Blackstone Edge, on the south-west border of Yorkshire, is easily examined by the observer who is not desirous of leaving the path. Here he will find the Grouse (in places) common, but he will search in vain for heather.

FREDK. J. STUBBS.

#### WOODCOCK BREEDING IN SURREY.

A CASE of the Woodcock having bred this year in Surrey may be worthy of record. Early in May a small party of gentlemen visited the estate of Lord Abinger, near Leatherhead, to view the prospects of the autumn shooting.

A recently-hatched Woodcock was caught by the keeper who accompanied the party. The young bird was liberated after a satisfactory examination had been made.

C. HAWKINS.

[In his notes (*Zool.*, 1901, 253) supplementary to the "Birds of Surrey," Mr. J. A. Bucknill (*vide* F. B. P. Long) records that the Woodcock breeds regularly in Bagshot Woods, while in a further contribution (*t.c.*, 1902, 308) the same writer says that it used to nest regularly in the Thursley district.—H. F. W.]

#### LATE NESTING OF THE WOODCOCK.

THERE can be little doubt that the Woodcock (*Scolopax rusticula*) is often, if not generally, double brooded. I have known two clutches of eggs to be laid in the same nest, the first brood having successfully hatched off; then, again, I have known fresh eggs in July, and others on the point of hatching by the second week in April. It is interesting to note the increase of the Woodcock as a breeding species in this country. On Spey Side a few years ago they were uncommon, now they might almost be called numerous. On one small estate seven nests were known to hatch-off last year, and one evening this season I had the pleasure of watching at least a dozen birds fighting to their feeding ground.

HEATLEY NOBLE.

#### SNIFE PERCHING.

A NUMBER of correspondents, among whom we may mention Messrs. H. W. Mapleton, Heatley Noble, H. W. Robinson Sydney H. Smith, and J. Whitaker, have sent us notes with reference to the Snipe perching upon posts, fences, hedges, etc. The habit, as we have already mentioned (*supra*, p. 59), has often been recorded. To the species we have already named as perching on trees in their breeding grounds, Mr. W. J. Clarke adds the Black-tailed Godwit, which he has observed in Holland perching upon the topmost twigs of tall bushes and trees, just as the Bar-tailed Godwit does in Lapland.

EDS.

#### INCREASE OF THE REDSHANK IN CLYDE.

IN the Blantyre district of the Clyde Valley a remarkable change in distribution and numbers has taken place in regard to the Redshank (*T. calidris*). Ten years ago one or two

pairs nested on a boggy part of the moor some few miles from the river, now nearly every grass or hay field from the moor to the riverside has its breeding pair. This year a pair has even bred within a stone-throw of the public highway, in close vicinity to a number of houses and where the tram-cars pass every few minutes, and it is now a common sight to see the old Redshanks perched on the gate posts and on the tops of the telegraph poles.

WALTER STEWART.

#### COMMON TERNS ON HOLYHEAD SKERRIES.

I HAVE just returned from a visit to the Skerries off Holyhead, and it may interest your readers to know that we observed three distinct colonies of Common Terns (*Sterna fluviatilis*), some fifteen to twenty pairs in each, while doubtless others were overlooked. Formerly it was supposed that only Arctic (*S. macrura*) and a few Roseate Terns (*S. dougalli*) bred on these rocks, but the Duchess of Bedford proved last year that such was not the case, and this season, having more time at our disposal, we were able to locate the colonies mentioned. All the eggs of both the Common and Arctic Tern were either hatched or on the point of hatching, and whilst nests of the former generally contained three eggs or young, we never saw more than two in any nest of *S. macrura* that was properly identified. In our experience, both at the Skerries and other breeding haunts, the Arctic Tern, like the Sandwich, *very* seldom lays more than two eggs, the Common and Lesser Tern far more often three than two, the Roseate generally *one*, sometimes two, but we have never seen three.

HEATLEY NOBLE.

[It is rather curious that until recently it was supposed that the Tern colonies off the N.W. coast of Anglesey contained no Common Terns, while in those on the N.E. and S.W. the Arctic Tern was not represented. It has, however, now been shown that colonies of Common Terns exist among the far more numerous Arctic Terns on the Skerries, and during the present season, in company with Commander Lynes, we had the satisfaction of identifying a small colony of Arctic Terns off the S.W. coast of Anglesey, so that both species appear to be increasing their breeding range.

With regard to the number of eggs laid by the various species of Tern, my own experience agrees with that of Mr. Noble in the main, except that in some localities clutches of three eggs of *S. cantiaca* are not uncommon while in others

they very rarely occur, and the normal clutch of *S. dougalli* consists of two eggs, laid apparently at an interval of two or three days.—F. C. R. J.

An examination of 76 nests of the Arctic Tern in one colony during this season gave the following figures:—11 contained 1 egg each, 4 contained 3 eggs, and 61, or over 80 per cent., 2 eggs. On the other hand at another colony (only a very small proportion of the nests being found) no less than 8 out of 13 contained 3 eggs.—N. F. T.]

### ARCTIC TERNS FEEDING ON CRANE AND MAY FLIES.

A CURIOUS incident happened a few days ago whilst fly fishing on Lough Melvin, co. Leitrim, for the famous gillaroo. We had landed on Inishtemple Island to lunch and during the interval I took the opportunity of visiting a Tern colony there; the young in most cases were hatched and a good number fully fledged, these I noticed were being fed not with sand eels (the sea being five miles distant) but with large crane flies, there being enormous quantities of these insects among rushes in the centre of the island.

On resuming fishing my brother, who was using a blow line with both a greendrake and crane fly on the hook, and whilst drifting past the spot on which the Terns were nesting, we were surprised to see an adult Arctic Tern dash down, seize the bait, and on rising again get caught and entangled in the fine line, the hook entering under the wing. It was an easy matter to reel the bird in, and putting a ring on one of its legs we let it go again. A second one was caught in a similar way a few minutes later, and doubtless had we been longer on the drift we should have hooked many others. The greendrake as well as the May fly were out in large quantities on the water and the Terns were feeding on these as well as the crane flies.

WM. C. WRIGHT.

### BRÜNNICH'S GUILLEMOT IN YORKSHIRE.

ON June 27th last I saw on the Bempton Cliffs an undoubted example of Brünnich's Guillemot (*Uria bruennichi*). I saw this bird several times as it always returned to the same ledge in company with a Common Guillemot, and it was not more than forty or fifty feet below me, so that I could discern every detail with the naked eye easily, and with my Zeiss glass I

might have had it in my hand. I have handled three Yorkshire specimens in the flesh, and lent the late Lord Lilford the bird that I picked up dead in Filey Bay, for Mr. Thorburn to paint, for reproduction in his book, "Birds of the British Isles." Both Lord Lilford and the late Professor Newton told me long ago that they saw no reason why the Brännich should not be found breeding on our cliffs, and the former always considered it a large form of the Common Guillemot, and looked upon the Common Guillemot, viz., ours, as a local race of the Brännich's. I have examined scores of Guillemots at different times, both in winter and summer plumage, and have found all gradations, between the Brännich's, the large Baltic race—and ours—running into one another.

OXLEY GRABHAM.

\* \* \*

LAND BIRDS NESTING IN HOLES on the wind-swept islands off the west coast of Ireland is the subject of an interesting note by Mr. R. J. Ussher in the "Irish Naturalist" for July (p. 159). He quotes Mr. H. M. Wallis's discovery of eggs attributed to the Reed-Bunting at the end of burrows two feet long on a lofty stack in the Aranmore Islands. This observation was published in the "Transactions of the Norfolk and Norwich Nat. Soc.," Vol. IV., Pt. IV., p. 467, and though the birds were not seen, the eggs are undoubtedly correctly identified. Mr. Ussher in the "Birds of Ireland," p. 77, mentions a nest "well under a boulder" on an island in Lough Mask. With regard to the Meadow-Pipit which has been recorded by Major Trevelyan (*BRITISH BIRDS*, I., p. 94) as nesting in holes in the ground, the case is less remarkable, as in Iceland according to Hantzsch (*Vogelwelt Islands*, p. 318) it breeds frequently tolerably deep down in lateral fissures in the ground, quite invisible from above; and a nest found by me in the side of a Roman fosse in Dorset was in a hole four or five inches deep in the steep side of the ditch. The third species which has been found breeding in a burrow is the Wren, which was found nesting in a Puffin's hole on the Blaskets by Mr. W. H. Turle (*Ibis*, 1891, p. 6). Mr. Ussher suggests that this adaptation to circumstances has the double advantage of giving shelter from the weather and protection from the voracious Gulls. Readers may also be reminded of a remarkable record in our last volume (Vol. II., p. 380) of a Wood-Warbler apparently nesting in a rabbit-hole.

F. C. R. J.



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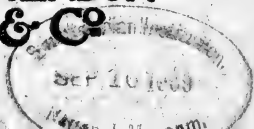
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# BRITISH BIRDS

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## ON THE PTERYLOSIS OF THE BLACK-THROATED DIVER.

BY  
W. P. PYCRAFT.

It is surely a matter for regret that so little interest has been taken in that side of ornithology which concerns structural characters, for these often throw an unsuspected

light on habits, and always, at any rate, contribute towards our understanding of the wider problems of ornithology. The study of Pterylography, founded by Nitzsch just upon a century ago, has really made very little progress since, and this because his work has been used as though he had left nothing more to be said or done in the matter. Nearly all the references to Pterylosis contained in the various text books can be traced back to Nitzsch; and his work, though good, was not always accurate, for he had often to depend for his interpretation on dried skins instead of birds in the flesh—a fruitful source of error. And thus it is that all the descriptions and figures of the Pterylosis, for instance, of the Black-throated Diver (*Colymbus arcticus*) are misleading, for they are one and all taken from Nitzsch—and he was wrong!

But, I hear some reader of this magazine say, this may be most interesting to the anatomist but it can scarcely be supposed to come within the purview of the ordinary student of British birds. But it does. A knowledge of the Pterylosis of the Grebes would have convinced Mr. Edmund Selous that he was mistaken when, in one of his books, he describes the Dabchick as sending up a shower of spray with a “flick” of its tail! Mr. Selous saw nothing of the kind, he only thought he did. A knowledge of Pterylosis would have brought to light the true nature of the plumage of the fledgling Tawny Owl long before I had the good fortune to discover it: and finally, it would have introduced more accuracy into the figures of our native birds, most of which, in details, such as the number and overlap of the wing-coverts, for instance, are hopelessly wrong, so that Eagles are shown with wings which properly belong to Sparrows, only the mistake has been masked by enlarging the size of the wing to fit the Eagle!! In short, then, if we want to know all that can, at any rate, be discovered by busy men, about our native birds, Pterylosis must be included: and I propose, from time to time, to recount such facts

on this head as may seem of interest to the readers of BRITISH BIRDS.

Circumstances recently placed in my way, at the British Museum, a newly-killed Black-throated Diver, and I immediately set to work to examine its Pterylosis, and to compare the results of my examination with the figures thereof which have from time to time appeared—all, however, from Nitzsch. All these figures are inaccurate, in showing that this bird presented extensive bare spaces, or “*apteria*” on either side of the body, and along the median line of the spinal tract between the shoulder-blades: the under surface is not figured. But in the text of Nitzsch’s work (*Eng. Trans.*, pub. 1867, Ray Soc., p. 152), he says of the ventral aspect, “The inferior space is very narrow, remains of equal breadth throughout, and extends forward only to the furcula.” This description is certainly inadequate. It is founded, apparently, on an examination of two species—the Black- and Red-throated Divers, and does not appear to fit either! We suspect, however, that here, as in so many other cases, Nitzsch was working from dried skins for want of fresh material, and this because he remarks that, “On the pinion of the wing there are probably only ten feathers . . . .” In a freshly-killed bird these could easily have been counted.

Now let us turn to the facts, which, as may be seen by a glance at the accompanying figures, in no way confirm Nitzsch’s figures, or descriptions; for this species of the genus *Colymbus* at any rate, is even more closely feathered than any of the *Struthiones*, which, so far, have been commonly regarded as the most densely feathered of all birds.

The *Aptorium mesogastræi* is traceable only with difficulty, and is represented by a very narrow space running immediately under the free edge of the carina sterni, and terminating with this, as may be seen in Fig. 1, the apterium being indicated by the narrow blank space down the middle of the breast. The *Aptorium tranci laterale*

is confined to a very small space not extending anteriorly beyond the level of the wrist-joint when the wing is

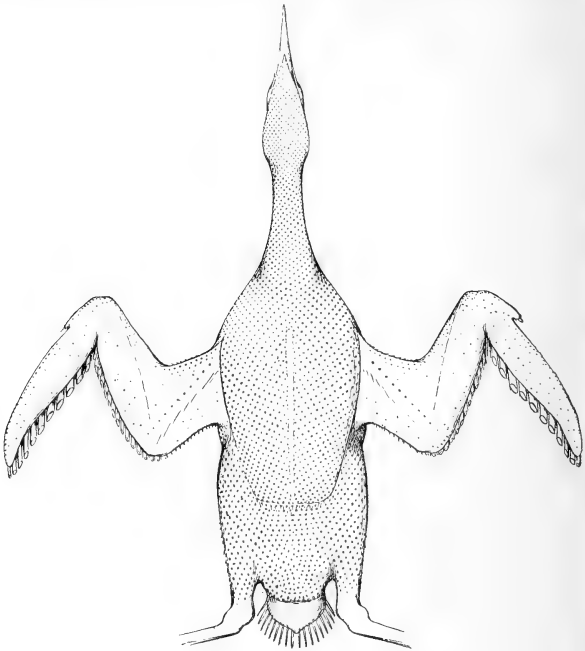


FIG. 1.

PTERYLOSIS OF THE BLACK-THROATED DIVER (UNDERSIDE).

*The dotted areas represent the pterygæ or feather-tracts.*

closed, nor posteriorly beyond the level of the femur: above it is bounded by the axilla, below by the flank-feathers. The small dorsi-lateral space overlying the



scapula is a vestige of the dorsal extension of this space.  
(Fig. 2.)

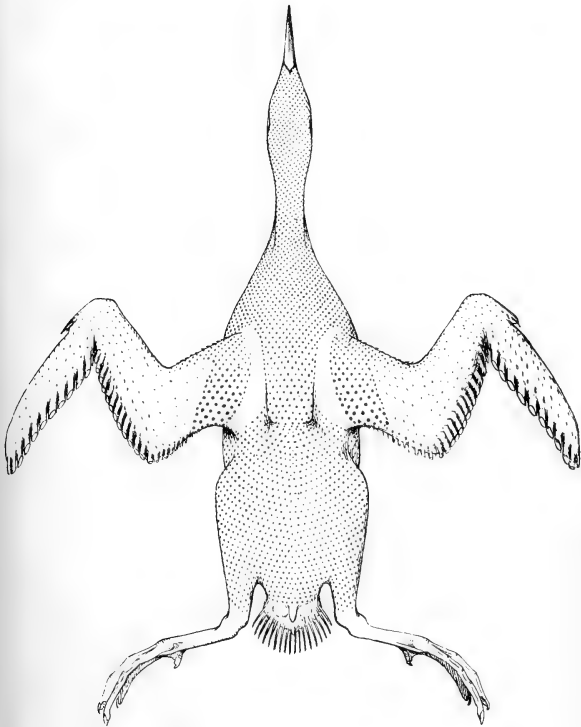


FIG. 2.

PTERYLOSIS OF THE BLACK-THROATED DIVER (UPPERSIDE).

[The dotted areas represent the pteryloxæ or feather-tracts.]

The cervical tract is absolutely continuous. The spinal tract is of enormous width posteriorly, and blends with the femoral tract, which is unusually closely feathered.

Anteriorly, it should be remarked, the spinal tract expands immediately behind the scapula, and, running outwards, joins the posterior border of the humeral tract: from thence it becomes continuous with the *pteryla femoralis*. In the region covered by the closed wing the feathers are very small, but only in what is practically the axilla have they disappeared. Just as the *pteryla femoralis* is continuous with the *pteryla spinalis* above, so it is also continuous with the *pteryla ventralis* below.

There are 11 primaries, and 18 rectrices.

There are yet other features in connection with the Pterylosis of this bird which have long puzzled me, and the most elusive of these concerns the nature of the feathers of the neck during the adult and winter plumages. On this theme, and on one or two minor points, I hope to have something to record in the near future. But I would draw attention here to the webbing of the feet, for I find, on careful examination, that the foot approaches that of the Steganopodous type, since the hallux is bound by a very distinct web to the base of the inner toe, and this web, it seems to me, should be regarded as a vestige of a thin sheet of membrane extending between the hallux and inner toes, as in the Steganopodes. An examination of the feet of nestlings, or embryos, may show that this web, during earlier stages of development, is more extensive than in the adult.

In considering the Pterylosis of the Divers one turns naturally to that of the Grebes for comparison. And here, as with the Divers, all figures so far published, seem to be inaccurate. I have just completed a study of the Dabchick from this point of view, and was surprised to find how far from the truth are the descriptions here referred to. When I have made a similar examination of the Great Crested Grebe I propose to communicate the results to the pages of BRITISH BIRDS.

OBSERVATIONS ON THE MIGRATION OF BIRDS  
IN THE MEDITERRANEAN.BY  
COMMANDER H. LYNES, R.N., M.B.O.U.*(Continued from page 77.)*

## II.—SPRING MIGRATION AT CRETE.

CRETE, perhaps the least known ornithologically of the large Mediterranean Islands, appears, as might be expected from its proximity to that country, to agree very closely in its avifauna with Greece.

In the winter time, in common with the other Mediterranean Islands to the westward, the bird-life is decidedly scanty; while in summer, judging from the influx of migratory visitors from the south up to the date of our departure on the 29th April, the bird-life seems to be much a counterpart of that met with in the rocky country around Platea, near the Gulf of Arta.

From its geographical position, and knowing that Greece in summer is populated with individuals of many species of birds that winter in Africa, it will be readily inferred that Crete is a migratory highway between the two regions, acting as a stepping-stone to birds from the southward, and enabling them to shorten their over-sea journey by some eighty miles, a diminution which can hardly fail to be welcome.

The only difficulty in such an inference seems to be the point of departure on the North African coast from which the influx might be expected.

Considering the physical features of the strip of country from Alexandria to Tripoli lying between the Sahara and the Mediterranean, it seems out of the question that as a winter base it can provide any but a minute proportion of the migrants that pass through Crete in spring. Furthermore, the majority of the Cretan migrants observed on the present occasion during

February, March and April, 1906, was composed of species known not to winter north of the Tropic of Cancer.

The fact remains, however, that we actually did find a very considerable passage across Crete to the northward, probably towards Greece and her archipelago, and perhaps also to part of Asia Minor; but the unfortunate absence of *data* as to the direction of arriving migrants leaves it open to doubt whether the birds do actually come from Egypt by a north-westerly course or from the nearest part of the African coast in Barca by a more northerly or even a north-easterly course. Unless the birds wintering south of the Tropic of Cancer cross large areas of desert in spring, it seems as if the bulk of the migrants at Crete might be expected to have come by a north-westerly course from the Lower Nile district.

But perhaps there is a regular migration passage across the Sahara *viâ* the oases. Such a journey would seem far less dangerous than a cross-sea passage to most birds; the food difficulty would be almost the only thing to contend with.

The "Venus" arrived at Suda Bay on the 3rd February, and remained in Cretan waters until the 29th April, with the exception of thirteen days in the middle of the latter month, when she was away at Athens. This made rather an important gap in our migration records, although, as a matter of fact, the only *new* arrivals found on our return from Athens were the Cuckoo, a warbler of the genus *Hypolais*, the Rock-Thrush (*Monticola saxatilis*), Turtle-Dove, Wood-Wren, and the Pied Flycatcher.

On one occasion only did we go to the southward of Crete, and then only to steam along the coast at several miles distance.

In consequence of this, all our bird-observations were made on the north side of the island, chiefly at Suda Bay, but although I made the most of my time by getting ashore whenever duty permitted it, the ship did so

much cruising that several undesirable breaks appear in the migration records, and, in addition, I never got even a glimpse of the country inland.

Considering the orders *Passeres* and *Picariæ* only, from present information Crete seems to possess about thirty winter species, some sixteen of which are resident and breed in the island.

Up to the date of our departure on 9th April, the spring migration had added to the winter list, according to my own observations, only thirty-one more species belonging to these two orders, twelve of which left some of their individuals to breed, the remainder passing on to the northward.

The first indication of the spring migration was the arrival at Suda Bay on the 11th February—a cold rainy afternoon with a strong west wind—of a few Crag-Martins (*Cotile rupestris*). On the 19th and 20th February Crag-Martins were plentiful around Suda village in the afternoon. The 23rd February brought the last two Crag-Martins to this district, and the species then disappeared for the year. Previous to the 11th February I had particularly looked out for the Crag-Martin without success. I felt quite sure at the time that this movement was a migratory and not merely a nomadic one, and concluded that it represented the departure of those birds which had wintered among the mountains in the interior of the island, and not the passage of any individuals from the southern coast of the Mediterranean. Skylarks, also, which were met with on the northern lowlands on the 18th February, we never saw subsequently.

Analysing my notes, I find that these two very early pioneer species of the spring migration were shortly followed by the *departure*—for I firmly believe that the influx of migrants from over the sea had not then commenced—of those species which are purely winter visitors to Crete, so that by the 15th March the island was almost denuded of all its winter visitors; and there ensued a short period of bird-desolation, until the 19th

March brought the first—so I believe—of the spring migrants from the south.

On the 19th March three species of *Limicolæ* and the Black-headed Wagtail, undoubted migrants from Africa, made their appearance.

The spring migration had started in earnest, and from the 20th to 27th March there was a regular rush of birds from the south, followed, up to the middle of April, by a steady arrival of fresh species. Each species in turn at first increasing in numbers and then either spreading to breed or passing on northwards.

Except in the case of one dull-plumaged Wheatear, which I did not obtain and which may have been a young male of the previous year, it was very marked how all the first arrivals were males, the Wheatears particularly being in beautiful fresh-coloured plumage; the females appeared to arrive on an average some ten days later.

The following list gives the order of arrival of the species, the dates being those on which the species was first observed. Specimens were obtained of those species marked with an asterisk:—

- |             |   |
|-------------|---|
| 19th March. | *Black-headed Wagtail ( <i>Motacilla melanocephala</i> ). |
|             | *Ruff ( <i>Machetes pugnax</i> ).                         |
|             | *Green Sandpiper ( <i>Totanus ochropus</i> ).             |
|             | *Common Snipe ( <i>Gallinago caelestis</i> ).             |
| 20th March. | Swallow ( <i>Hirundo rustica</i> ).                       |
|             | Greenshank (?) ( <i>Totanus canescens</i> ).              |
| 21st March. | *Common Wheatear ( <i>Saxicola ænanthe</i> ).             |
|             | *Short-toed Lark ( <i>Calandrella brachydactyla</i> ).    |
|             | Ringed Plover ( <i>Ægialitis hiaticola</i> ).             |
|             | Redshank ( <i>Totanus calidris</i> ).                     |
| 22nd March. | *Black-eared Wheatear ( <i>Saxicola albicollis</i> ).     |
| 23rd March. | Common Heron ( <i>Ardea cinerea</i> ).                    |
| 24th March. | *Ruëppell's Warbler ( <i>Sylvia rueppelli</i> ).          |
|             | *Black-throated Wheatear ( <i>Saxicola melanoleuca</i> ). |
| 25th March. | Common Redstart ( <i>Ruticilla phœnicurus</i> ).          |
|             | *Subalpine Warbler ( <i>Sylvia subalpina</i> ).           |
| 27th March. | *Sedge-Warbler ( <i>Acrocephalus phragmitis</i> ).        |
|             | Sand-Martin ( <i>Cotile riparia</i> ).                    |
|             | *Little Stint ( <i>Tringa minuta</i> ).                   |
| 28th March. | *Tree-Pipit ( <i>Anthus arboreus</i> ).                   |
| 29th March. | *Nightingale ( <i>Daulias lusciniæ</i> ).                 |
|             | *Whitethroat ( <i>Sylvia cinerea</i> ).                   |
|             | *Lesser Whitethroat ( <i>Sylvia curruca</i> ).            |
|             | *Wryneck ( <i>Lynx torquilla</i> ).                       |

1st April.	Whinchat ( <i>Pratincola rubetra</i> ).
	*Tawny Pipit ( <i>Anthus campestris</i> ).
	*Hoopoe ( <i>Upupa epops</i> ).
	Marsh-Harrier ( <i>Circus æruginosus</i> ).
	Hen-Harrier (?) ( <i>Circus cyaneus</i> ).
3rd April.	*Blue-headed Wagtail ( <i>Motacilla flava</i> ).
4th April.	Montagu's Harrier (?) ( <i>Circus cineraceus</i> ).
	Spotted Crake (?) ( <i>Porzana maruetta</i> ).
8th April.	*Ortolan Bunting ( <i>Emberiza hortulana</i> ).
	*Cretzschmar's Bunting ( <i>Emberiza caesia</i> ).
11th April.	House-Martin ( <i>Chelidon urbica</i> ).

On the 12th April we left for Athens, not returning thence to Crete until the 23rd April, our last five days at Suda Bay adding six new species to the above list, viz. :—

- \*Rock-Thrush (*Monticola saxatilis*).
- Wood-Wren (*Phylloscopus sibilatrix*).
- Tree-Warbler (*Hypolais* sp.).
- Pied Flycatcher (*Muscicapa atricapilla*).
- Cuckoo (*Cuculus canorus*).
- Turtle-Dove (*Turtur communis*).

I have no note of seeing migrants at sea either on the passage to Athens or back again ; on both occasions it was fine, settled weather.

#### *Weather.*

Up to the 10th April the weather was very unsettled. Frequently for days together there were squalls of rain and wind, which seemed to have the effect of delaying the migrants on the north coast of Crete from continuing their passage. After the 10th April the weather picked up, and was nearly always fine and sunny.

Unfortunately, material is insufficient to enable a satisfactory connection between the weather and the progress of migration to be formed, but I have a note, made on the spot, that during the very rough and rainy weather of the first week in April there seemed to be a regular banking up of migrants on the north coast, pointing to the fact that they would not, or could not, face the weather. Directly it cleared up, away went the birds.

*Times.*

The principal time of arrival of migrants on the north side of the island, in the vicinity of Suda Bay, was unquestionably late in the afternoon, about an hour before sunset and onwards.

I am somewhat inclined to think that this represented the result of a small diurnal shifting of quarters from the south side of the island, preparatory to a departure northwards at dusk, rather than the true arrival from over the sea. This surmise could not be verified, however, on account of the entire absence of *data* concerning the south coast. In the early mornings there was never anything like the number of migrants to be seen that there had been the previous evenings, the obvious inference being that the majority had departed at some period of the night.

*(To be continued.)*



## ON THE SUPPOSED "COLOUR-CHANGE" AND THE SPRING MOULT OF THE BLACK-HEADED GULL.

BY

P. H. BAHR, M.A., M.B., M.B.O.U., F.Z.S.

A SMALL investigation which I undertook for the purpose of attempting to settle the vexed question with regard to the supposed vernal colour-change in the Black-headed Gull (*Larus ridibundus*) is perhaps worth recording.

In the fourth edition of "Yarrell" (III., p. 603) we find it stated that an individual of this species in the Zoological Gardens of London assumed the black head of the spring plumage in five days, not, it is said, by a process of moulting, but by a complete colour-change. Now, I do not suppose there are any who at the present day believe that the vernal plumage is assumed in this manner, but it is asserted by some, notably by Mr. J. L. Bonhote,\* that previous to the spring moult there is a distinct colour-change in the feathers of the head over the area covered later by the brownish-black feathers of that moult.

In the case of the North American Laughing Gull (*Larus atricilla*)† Mr. Beebe proved that the black head was assumed by a moult, the white feathers of the head being gradually displaced by new grey feathers with white tips, which latter were afterwards worn off.

In January, 1908, I purchased five adult Gulls of this species, out of a large collection of which the majority wore the white cap with the post-auricular stripe of the winter plumage. Amongst them, however, were two individuals with darker heads. I labelled three of them by means of nicks cut into the primaries of their wings, 1, 2, and 3, so that they could be identified with certainty whenever examined. The other two adult specimens were kept as controls, and besides these I had a young bird of the year caught wild, which I labelled No. 4, and

\* "Avicultural Magazine," Jan., 1907, p. 103.

† "Auk," Vol. XXII., No. 4, Oct., 1906.

three young birds of the year reared by hand. They were all kept in a wired compartment, and carefully examined every week. The heads of the marked birds were drawn to scale, and the amount of colouring noted once every week. In order to identify individual feathers certain of them were stained red with carbol fuchsin and indicated on the diagram, so that they could be recognised again in order to ascertain whether any colour-change was actually taking place in them or no. Two or more feathers were extracted and mounted on slides and examined microscopically every week.

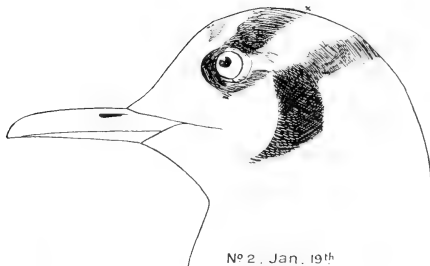
The result of the inquiry goes to prove, I venture to think, that no such thing as colour-change occurs in this species before the moult at least, and that the black head is gradually assumed by growth of the new black feathers beneath the white ones of the winter dress. One circumstance which vitiates the experiment is that being kept in close confinement and living under unnatural circumstances, the onset and duration of the moult was delayed. In the immature wild bird no change of any description was noted in the head or neck, though the brown feathers on the back and wing were gradually lost. The immature birds raised by hand had a complete body-moult in January, but no indication of any black feathers on the head was observed. However, birds in immature plumage do occasionally assume the black hood; two very good examples were to be seen in the Zoological Gardens during the spring of 1908.

In the wild state the spring plumage is often assumed early in January, but more frequently in early February. From observations made during the spring of this year on London Bridge, where the birds come so close that each step in the change may be observed at close range, I found the moult takes about a week to complete.

Minute observations on my birds began on January 19th, 1908. Fig. 1 shows how the heads of the three adult marked birds then appeared. The charted diagrams made every week showed no change till March 29th,



Nº 1. Jan. 19<sup>th</sup>



Nº 2. Jan. 19<sup>th</sup>



Nº 3. Jan. 19<sup>th</sup>

\* FIG. I.—HEADS OF THE THREE MARKED BLACK-HEADED GULLS.

\* All the figures are three-fourths natural size. In figures 2 and 3 the area of black has been shown by shading.

when in bird No. 3 (see Fig. 2) new feathers were observed to be sprouting in the supra-orbital area and under the



FIG. 2.—BLACK-HEADED GULL, NO. 3, ON MARCH 29TH.

The black dots represent new black feathers, the papillæ of which are just appearing beneath the skin. The rami of the white feathers under the chin are dropping off, together with the downy plumules at the base, leaving the calamus with a few worn rami still adherent.

chin, when the old feathers were losing the rami at their bases, giving the bird a bedraggled appearance in that

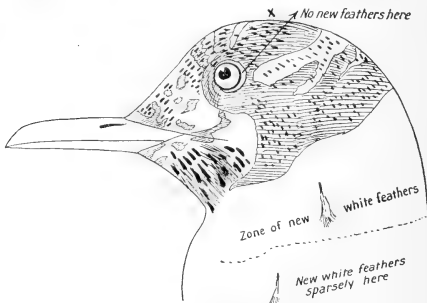


FIG. 3.—BLACK-HEADED GULL, NO. 3, ON APRIL 5TH.

New feathers are appearing in great quantities under the chin, where they have reached the length shown. Numerous white feathers are appearing on the nape of the neck.

region. On April 5th new feathers were coming more thickly in the same regions, and in addition they were

appearing on the crown and forehead. New white feathers were sprouting on the nape and sparsely on the

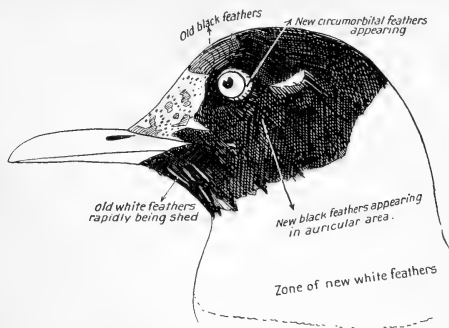


FIG. 4.—BLACK-HEADED GULL, NO. 3, ON APRIL 19TH.

There are only a few worn rami clinging to the calami in the region below the chin as shown. Feathers are now appearing most numerous in the frontal area above the upper mandible. Old black feathers, much worn, still remain on the vertex, interspersed with new ones, which are blackish-brown in colour.

breast (see Fig. 3). Hereafter new feathers began to appear quickly under the old black feathers of the

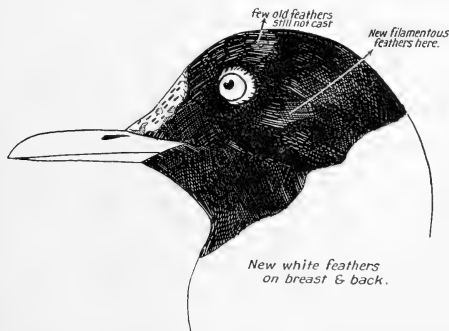


FIG. 5.—BLACK-HEADED GULL, NO. 3, ON APRIL 26TH.

auricular area, and by April 19th the head appeared almost black, save for a white patch above the upper

mandible, a few scattered worn feathers under the chin, and a small white patch on the posterior part of the auricular area. At this time, too, the old feathers of the small white circum-orbital patch were being replaced by new ones (see Fig. 4). On April 26th a small white patch remained on the forehead; the auricular area was supplied by long new filamentous feathers; only a few worn and faded black feathers were to be found on the top of the crown; and the breast and back were covered with a new growth of white feathers, many of those on the breast having a roseate hue (Fig. 5). On May 3rd, when the observations ceased, the head was entirely black save for a few ragged remains of old feathers on the

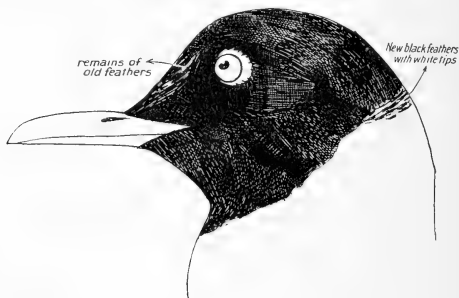


FIG. 6.—BLACK-HEADED GULL, NO. 3, ON MAY 3RD.

forehead. At the posterior part of the black patch were two or three rows of black feathers with white tips (Fig. 6) (analogous probably to those found in *L. atricilla*).

In No. 2 the change was exactly similar, save that the new feathers did not appear till April 5th, and started to grow sooner in the auricular area. This bird, however, never entirely completed its moult during the summer.

In No. 1 the changes were to all intents and purposes similar.

All my birds assumed feathers which were more of a slaty black, not a brown colour, great variation in this respect being seen in different individuals.

During the spring of this year (1909) I have had three individuals under close observation—two mature birds and a young bird received in 1907, which this year for the first time assumed the black hood. No change of any sort was observed till the middle of March, when they completed the moult in a fortnight.

Those feathers mounted for microscopical examination showed the usual changes preliminary to moult, and a complete series of developing black feathers. No invasion of the shaft of the old feathers with pigment, which would undoubtedly take place in colour-change, was noted. Till April 5th feathers from the vertex and chin were observed to have the terminal rami broken off and the softer basal ones gradually stripping off from the shaft. This was especially noticeable in those from under the chin, where many of the white feathers were only represented by a calamus having a terminal tuft of rami. The complete new black feathers from the crown differed considerably from the old ones in the same situation in being shorter, more compact and round, and the rami were provided with longer and stouter radii. These, in short, were the main changes observed in a large number of specimens. The process seemingly being that the rami at the base of the feathers strip off as the new one pushes its way underneath.

The conclusions I have arrived at are as follow:—

(1) That individuals vary in the amount of black on the crown in the winter plumage, and that this variation has given rise to the belief that a "colour-change" takes place.

(2) That no colour-change occurs.

(3) That a moult takes place usually about the beginning of February, and under natural conditions takes about a week to complete, and that it not only embraces the head but the breast and back as well.

(4) That birds of the previous year occasionally assume the black hood of the breeding plumage, while retaining the immature dress on back and wings.

THE BROWN FLYCATCHER (*MUSCICAPA  
LATIROSTRIS*, RAFFLES) IN KENT.

A NEW BRITISH BIRD.

BY

M. J. NICOLL, M.B.O.U.

AT the meeting of the British Ornithologists' Club held on May 26th, 1909, I exhibited an adult male of the Brown Flycatcher (*Muscicapa latirostris*, Raffles) which had been shot near Lydd, close to the borders of Kent and Sussex on May 21st, 1909. It was examined in the flesh by Mr. J. L. Bonhote and Dr. N. F. Ticehurst.



Brown Flycatcher (*Muscicapa latirostris*), shot near  
Lydd, Kent, on May 21st, 1909.

In appearance this bird somewhat resembles an immature Pied Flycatcher, but lacks the white on the wings and tail. The bill, moreover, is slightly wider at the gape than that of *M. atricapilla*.



Not only is this Flycatcher new to the British list, but this is the first occurrence of the bird in Europe, and it has never before been recorded as occurring west of Chamba, Kashmir. It is unlikely, for many reasons, that this example escaped from confinement, and an "assisted" passage—an easy way out of a difficulty—is not to be thought of in this instance.

The summer range of the Brown Flycatcher, as given by Dr. E. Hartert (*Vög. pal. Fauna*, IV., p. 477), is East Siberia to the Baikal Sea, Korea and North China, the Himalayas westwards to Chamba.\* Its winter range, however, extending to India, Ceylon, Malacca, Andamans, Hainan, South China, etc., gives us a clue, I think, to its appearance on our shores. The bird would meet during the winter such species as *Phylloscopus superciliosus*, and it seems quite possible that the example under discussion came westwards in company with some such species as the Yellow-browed Warbler, which, although of rare occurrence in Western Europe in *spring*, has been recorded at that season from Heligoland, and once just lately from Scotland.

\* Japan must, however, be added to the breeding range of this species (*cf.* Seebohm, *Birds Jap. Emp.*, p. 62; C. Ingram, *Ibis*, 1908, p. 140). Apparently it also nests in India (*cf.* Stuart-Baker, *Ibis*, 1906, p. 277).—F.C.R.J.

# NOTES

## THE VERTEBRATE FAUNA OF CHESHIRE.

I HAVE in preparation and almost ready for publication a vertebrate fauna of the county of Cheshire. I should be greatly obliged if any readers of BRITISH BIRDS who have notes on the avifauna of the county, which might be suitably incorporated in the work, would communicate with me, at Brentwood, Bowdon, Cheshire.

T. A. COWARD.

## THE ORNITHOLOGY OF SUSSEX.

As I desire to make my forthcoming work on the ornithology of Sussex as perfect as possible, I shall deem it an act of courtesy if any of your readers conversant with the bird-life of that county will let me know (1) whether they know of or have ever found a breeding haunt of the Wood-Lark there, and (2) if the Whinchat is ever at all numerous. I have now worked Sussex hard since December, 1903, but it was not until this last spring that I found a breeding haunt of the Wood-Lark. I saw three birds there and found one nest. As to the Whinchat, I consider it a local and rare breeder in Sussex, though it comes in fairly well on migration, especially in some years. On the other hand, some springs I hardly ever see it. Of course I know a few—but they are very few—districts where it nests annually.

I should also be grateful if any of your readers could supply records, *since* 1891, of the following birds occurring in Sussex, or even before that date, provided that the fact was not notified in Borrer's "Birds of Sussex": Gyr-Falcon, Greenland Falcon, Tengmalm's Owl, Scops Owl, Snowy Owl, Eagle-Owl, Red-winged Starling, Little Bunting, Crested Lark, Short-toed Lark, Dipper, Black-throated Thrush, White's Thrush, Alpine Accentor, Bearded Tit, Pallas's Sand-Grouse, Black Grouse [when was the last authentic nest in Sussex?], Crane, Great Bustard [my latest record is *circa* 1880], Little Ringed Plover, Bonaparte's Sandpiper, Buff-breasted Sandpiper, Spotted Sandpiper, Gull-billed Tern, Sooty Tern, Bewick's Swan, Grey Lag-Goose, Ivory-Gull, Iceland Gull, Glaucous Gull, Buffon's Skua, Fulmar Petrel, Manx Shearwater, Slavonian Grebe, Eared Grebe, and Shag.

I have very few notices of the Ruff; and I should like to know if any of your correspondents have ever known or

know of any spot in Sussex where Black-headed Gulls have bred or do breed. Although I see birds of this species in every month in the year, and although I have seen small lots of adult birds over likely ground in April and even later, these have never bred.

I am very doubtful about Borrer's records of the Eagle, Scops and Tengmalm's Owls. The last two probably escaped from captivity, as no doubt have all the Little Owls of which I have notices.

JOHN WALPOLE-BOND.

[Mr. Walpole-Bond has apparently not consulted Mr. J. G. Millais' article on the Birds of Sussex in the "Victoria History of Sussex," Vol. I., pp. 273-298. Records which are not to be found in Borrer's work will be found with regard to the Crested Lark, the Bearded Tit (seen by Mr. Meade-Waldo in 1892), Great Bustard (a probable occurrence in 1899, and one shot in 1891), etc. Mr. J. Weaver, in a chapter on the Fauna and Flora in Gordon's "History of Harting," gives some interesting notes on the breeding of the Wood-Lark, Raven, Grey Wagtail and Marsh-Warbler.—F. C. R. J.]

The Ruff is a regular autumn migrant in small numbers on the coast of east Sussex, *e.g.*, Rye Harbour.—N. F. T.]

#### THE LONGEVITY OF BIRDS.

IN reply to your editorial note to my remarks on the longevity of birds, may I say that if they depend mainly upon accident for the curtailment of their lives, the chances are that a few survive in a wild state for the natural term of their existence.

I cannot believe that because a bird is saved from starvation and natural enemies its life will be abnormally prolonged under such conditions as caging, pinioning, chaining by the leg, etc., etc.

If, therefore, a bird is known to live thirty to sixty years under these adverse conditions, it looks as though the natural course of its life were a great deal longer than is generally supposed.

So great are the perils of migration, starvation, and their natural enemies that the chances are very much against their surviving for any length of time, and it is in this way that I would suggest that Nature regulates the balance and prevents undue increase.

The fact that one pair of birds apparently returns to the same nesting site (often in a peculiar position) for a great number of years, rather points to the possibility that a very small proportion escapes accidental death. That the same

pair *does* return for two or three years I know for a fact, and if they were not the same Wrynecks which returned to the nest for sixty years it would be interesting to know how their numerous progeny decided amongst themselves which of them was to return to the paternal abode, and how they knew that they would find it empty ?

M. BEDFORD.

[It is unfortunate that there is very little basis of recorded fact to go upon in this matter and, therefore, I fear that this discussion tends to become academic. There are so few instances which give us positive proof of the same two individuals returning to the same nesting site that I hope Her Grace will place on record the details of the case referred to above. Reverting to the Wrynecks, I do not think it is necessary to suppose that the young ones came back to the old nesting site ; the suggestion I made on page 63 seems to be the simplest, viz., that it so happened that both birds of the pair never died in any one winter, and that the survivor got a new mate. The individuals might thus have changed many times during the sixty years.—H. F. W.]

THE ages to which birds live has always been a subject of interest to me, and the following records from my aviaries may be of value :—

Lapp Owl, 27 years.

Ural Owl (a pair), 22 years, and still vigorous.

Pintail Sand-Grouse, 17 years, and still in perfect health, but now lays infertile eggs.

Wigeon, 20 years.

Pochard, 22 years (she reared a brood annually for 20 years).

A wild Turtle-Dove (*Turtur communis*), which was noticeable by reason of its having a stiff leg, turned up about May 1st every year at the place where we fed our water-fowl for twenty-one years.

E. G. B. MEADE-WALDO.

APROPOS of your notes on the longevity of birds (p. 79) it may be of interest to state that there is on the Loch of Skail in Orkney a Whooper Swan which was winged, captured and pinioned sixty-three years ago.

It is well protected on this loch, which is a private one, but it walks about a great deal, often as far as the large tidal loch of Sterness, four miles away. It has met with many accidents in its career, chiefly broken wings, one man in the neighbourhood having set the wing twice in the last six years.

Although it has been there so long it is still shy and wild, except when captured after an injury, when it is very savage. What age it really is, it is impossible to say, as it was an adult bird when captured sixty-three years ago.

H. W. ROBINSON.

YOUNG have been raised both this year and last from the mating of a male Barbary Dove, which has been in my possession for twenty-three years, and a young female of the same species.

RICHARD STAPLES-BROWNE.

IN regard to the longevity of birds, the following translation of a record by the late Herr H. C. Müller in his "Færøernes Fuglefauna" may be of interest:—

"A farmer at Sandhøe took in 1781, during the summer, two young Herring-Gulls out of a nest and reared them at his home. He let them have their freedom, and the Gulls, which appeared both to be cocks, stayed sometimes near the house and sometimes in a field in the neighbourhood, or even made short flights out to sea, from which, however, they always came back. After some years one of the Gulls was accidentally shot during one of these flights; the other continued its accustomed mode of life, and became so tame that it took food out of its master's hand. Finally, it paired with a wild Gull, and they selected for a nesting place a rocky cliff (near by), from which the cock bird, after the usual time, went back to the farmer's house in company with his mate and half-grown young. During the summer the Gull family lived mostly on the shore, especially when fishing was good, and they then fed chiefly on offal from the fishing, as the entirely wild Gulls do. When the fishing got slack, and particularly during the winter, the pair of Gulls constantly sought food at the peasant's house, and the cock bird still took what was handed to him. . . . In 1846 these remarkably old Gulls were still living, and were consequently sixty-five years old; but, in spite of this advanced age, carried on under such peculiar relations, there was neither in their colour or in other respects any difference to be detected between them and the entirely wild Gulls. In 1847 the old peasant died, and a short time afterwards the Gulls also went away."

Herr Müller also mentions a Puffin which lived in a peasant's house and yard for twenty-nine years, and finally died as the result of an accident.

C. B. TICEHURST.

#### UNUSUAL NESTING-SITES OF DIPPER, BLUE TITMOUSE AND HOUSE-SPARROW.

THE following three nests, built under more or less abnormal conditions, have this year come under my observation in the Blantyre district of Clyde Valley:—

1. DIPPER (*Cinclus aquaticus*).—The site chosen was a tube-shaped hollow branch at the root of a tree on the bank of a

stream. The hollow was about four inches in diameter, and the nest was placed about sixteen inches from the entrance. It was shallow, cup-shaped, the materials used being damp moss with a lining of leaves, and the usual dome, owing to the want of room, was entirely dispensed with.

2. BLUE TITMOUSE (*Parus cœruleus*).—The site chosen was in a Scottish fir-tree, about twenty-six feet from the ground. Seen from below it looked just like a small nest of a House-Sparrow. It was built against the trunk and supported by two small branches, the materials used being white withered grass, lined profusely with cow's hair, a few horse-hairs, and one or two feathers. It was cup-shaped, and a little bulky at the foundation.

3. HOUSE-SPARROW (*Passer domesticus*).—The site chosen was a hawthorn hedge about fifteen feet high, and instead of the nest being well out of reach, it was only three feet from the ground. It was the usual roofed nest, built with withered grass and lined with feathers.

All three nests contained quite normal eggs.

WALTER STEWART.

#### LAND-BIRDS NESTING IN HOLES.

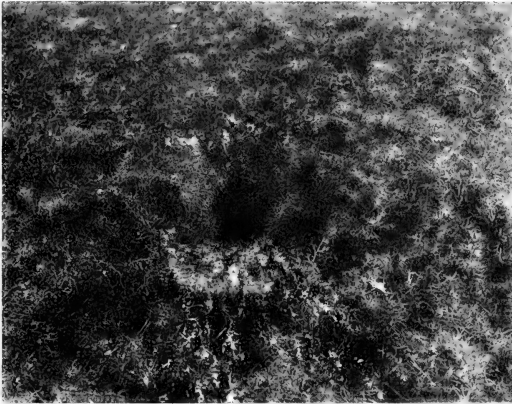
RELATIVE to the note on this subject in the "Irish Naturalist" quoted in the last number of BRITISH BIRDS, it may be of interest to state that in May of the present year I saw a nest of the Wood-Lark in Norfolk built in a deep rabbit-scrape on bare, flat warren, and at least eighteen inches from the entrance.

NORMAN GILROY.

#### STARLINGS' NESTING SITES.

IN the last number of BRITISH BIRDS Mr. F. W. Headley records the finding of a Starling's nest in the wooden casing of the barrier of the Haileybury rifle-range. The point, however, which struck me as of most interest, was that the birds actually removed and carried to a distance a number of flints in order to make room for their nest. A letter in the "Field" for July 3rd last, headed "Odd Site for a Starling's Nest," records a nest situated in a split in a rock on the side of an open drain on the golf-links at Kirkwall. In both of these cases the actual site of the nest is not very unusual, for, in truth, the Starling will make use of any hole or cranny that is at all suitable to its requirements. A lengthy list of various nest-sites will be found in Yarrell's "British Birds," and in

the different volumes of the "Scottish Faunas," notably those of Orkney and the Outer Hebrides. What may be considered a normal site in one locality is unusual in another, and only affords evidence of the great adaptability of that bird to its environment at the breeding season. This point is the one of real interest, and as extreme cases of their adaptability, these nests on or in the ground are good illustrations. Although they are all mentioned in the books above referred to, they certainly come as somewhat of a surprise to one who has not looked up the particular point. During the present summer, in Orkney, I found that in certain parts of the mainland and the adjacent small islands these sites were actually *the*



Rabbit-hole opening on level ground, used by Starlings for nesting purposes. Roseness, Orkney.

*normal ones* and quite common. The holes in the ground containing nests that I examined were all rabbit-holes, and not only were those opening on the face of a low bank or cliff occupied, but many also of those opening on the surface of perfectly level ground were also used by Starlings. Most of these were of the most common type of rabbit-hole with a scratched out sloping entrance, but one or two nests that I found were in holes, the entrances of which were perfectly round and flush with the surface, of the type known as "bolt" or "pop-holes." In these there was a vertical drop of a foot

or so before the bottom of the gallery was reached, and the nest was situated about two feet from the entrance. The majority of the rabbit-holes were in peat, and consequently by no means dry, though, perhaps, warm enough habitations. The accompanying photograph shows the entrance of one of these "pop-hole" Starling nests. The other *normal* nesting site on these islands was under loose stones on the shore, the sort of situation one would expect to find Storm-Petrels breeding in. The mound of stones shown in the photograph was about three feet high and at the bottom of a low cliff, and only distant a couple of yards from high-water mark. It was tenanted by a numerous colony of Starlings whose nests were



Starling's nesting site on the sea-shore. Lambholm, Orkney.

easily found by turning back the stones, and it was curious to see and hear the young birds scrambling away through the crannies like so many rats, as one walked over the mound. Unfortunately at the time of my visit, the nests all contained young birds nearly ready to fly, so that although I was able to "ring" a certain number, I was unable to secure a photograph of a nest with eggs. Another illustration of a normal nesting site for a given locality is the utilisation of the piles of empty fish-boxes by the fishermen's houses along the coast of Dungeness in Kent.

N. F. TICEHURST.



## UNUSUAL NESTS OF THE ROBIN.

THIS season I have photographed two unusual nests of the Robin, a species well known for its eccentricity with regard to its choice of nesting sites. In these cases the birds showed a distinct preference for high situations rather than curious positions. The one was placed in the top of a holly-hedge and the other in the fork of a thick fir-tree, both about four feet from the ground. They were composed of moss, leaves and, in the first case, horsehair.

A. G. LEIGH.

## THE MEANING OF BIRDS' SONGS.

REVERTING to Dr. P. R. Lowe's valuable note on the winter-singing of the Blackcap, I should like to question his assumption that it had necessarily any sexual meaning. There is evidence enough to show that birds sing to give expression to other feelings than those of love. It cannot for example be contended that the Robin sings in winter to please his mate, for if the latter venture but a few steps into the area which he regards as his exclusive property she is promptly assaulted and driven forth in a manner that is anything but lover-like. He sings to please himself. Birds, again, frequently sing when fighting, between the rounds. The Wren, Sky-Lark, and Song-Thrush illustrate the fact. It may be contended that both the fighting and the singing have in this case their basis in sexual feeling, but even this is doubtful. I have seen Song-Thrushes engaged in battle, singing with what breath was left after each bout, long after mating had been concluded. The quarrel may have been due to the proprietary instinct or to the parental instinct, both taking the form of an objection to another bird's invasion of the area that contained the nest or nestlings.

F. B. KIRKMAN.

THE COLOUR OF THE MOUTH OF THE  
NESTLING WAXWING.

MR. W. H. ST. QUINTIN has just presented to the British Museum of Natural History a nestling Waxwing (*Ampelis garrulus*), sending therewith some very valuable notes on the coloration of the mouth-parts. "The inside of the mouth" he writes, "was brilliantly coloured; a patch of violet-blue on each side of the lower mandible, and the same above—these colours have sorely faded already, but the patches on the palate are bright still, and I hope may remain till you see them. The

remainder of the interior lining of the mouth was of a brilliant, deep, cherry-red, and the tongue a port-wine colour. The effect was startling when the young bird gaped!" "It is curious to note," he also remarks, "that at this tender age (ten days) the wax tips are visible."

The colours of the mouth have now completely vanished, but the red of the "wax" tips to the secondaries can still be seen within the transparent feather-sheath.

W. P. PYCRAFT.

#### THE RED-RUMPED SWALLOW IN KENT.

At the meeting of the British Ornithologists' Club held on May 26th, 1909, I exhibited an adult female Red-rumped Swallow (*Hirundo rufula*). This bird was shot on May 16th,



Red-rumped Swallow (*Hirundo rufula*), shot at Jury Gap, Kent, on May 16th, 1909.

1909, at Jury Gap, on the coast actually on the boundary of Kent and Sussex, and was seen in the flesh by Dr. N. F. Ticehurst and myself. This is the second recorded occurrence

of this species in Great Britain, the first having been recorded from Fair Island by Mr. W. Eagle Clarke.

The appearance of this Swallow in Great Britain is not so very surprising as an example was obtained on Heligoland on May 31st, 1855. The habitat of this species as given by Mr. Dresser (*Man. Pal. Birds*, p. 267) is:—"Southern Europe as far west as Italy and Sicily, ranging east through Asia Minor, Palestine to Persia, Afghanistan and Turkestan. In winter it occurs as far south as Abyssinia, and it has strayed on one occasion at least as far north as Heligoland, and has occurred in Malta."

Both this bird and the Brown Flycatcher (recorded on p. 112) were sent to Mr. Bristow, of St. Leonards, for preservation.

M. J. NICOLL.

#### LESSER REDPOLL NESTING IN ESSEX.

LAST year I was able to record the breeding of the Lesser Redpoll (*Linota rufescens*) in Essex (*cf.* Vol. II., p. 203). I am pleased to be able to report that a pair have built in the same place again this year, this time in a crutch at the top of a walnut-tree and about thirty-five feet from the ground, the tree being not more than forty yards from the one used last year.

A single bird appeared April 10th, and it was not until June that I saw the second one. Incubation did not begin until the last week of June, and the young flew on July 24th.

I find, on referring to my notes, that last year the young flew just about the same date as this year, so that from these cases and from what Mr. Bond has stated with reference to the same bird in Sussex (*supra*, p. 22) it would seem as though the species nests later in the south of England than in Sutherlandshire or Cumberland, in both of which counties I have found eggs by the first week in June.

LEONARD GRAY.

#### THE IRRUPTION OF CROSSBILLS.

ON June 28th, a flight of sixty or so Crossbills, in a somewhat exhausted state, pitched on the rigging of the "Dunottar Castle," about sixty or seventy miles from the Hardanger Fjord, Norway, towards which she was steaming. They took refuge on board about seven in the evening, and after resting a couple of hours took their departure. They first took to the upper rigging, but soon made their way downwards, and finally rested in the boats on the davits.

My brother, who was on board at the time, gives me the

impression that most of the birds were immature, but that there were some older birds among them.

It will be noted that this was just about the date that the birds were first seen in the north of Scotland.

F. H. CARRUTHERS GOULD.

ON July 9th several Crossbills alighted on a group of fishing-boats, about twenty miles out from the Farne Islands, off the coast of Northumberland. One was captured, and brought alive into Dunbar, where I saw it in a cage a week later. It is an adult male, and from the shape of the bill, and its appearance generally, belongs, I should say, to the continental form. A flock of about twenty also settled for some hours the same day on a steamer off Bervie, Kincardineshire, as reported in the "Scotsman" of 15th July.

WILLIAM EVANS.

IN addition to the above notes and those published in our last number (pp. 82-83), we have received a number of communications on this subject, which will be more convenient for reference if tabulated under the respective counties to which the observations refer. Although there has been, without doubt, an unusual irruption this year of Crossbills from oversea into this country, it must not be too hastily concluded that all the records can be traced to this source. In some of the districts we know that Crossbills appear every year in July, but in such cases there is certainly evidence that this year their numbers have been larger. Some of our correspondents have noted that the birds move on after exhausting the available food-supply, and this may be the underlying cause of the periodic large movements of these birds.

SCOTLAND.—Ten or twelve at Creetown, Kirkcudbrightshire, from July 29th to time of writing (August 3rd) (*W. Walmesley White*). A flock of forty near Castle Grant, Strathspey, on July 19th, feeding on pine-cones and on the galls of the spruce *aphis* ("Forester," *Scotsman*, 24, VII., 09). Eight feeding on green fly "during the last fortnight" (July 22nd), at Wick, Caithness (D. Maclean, *Scotsman*, 24, VII., 09). One caught at Hawick, Roxburghshire, about July 20th (J. H. W., *Scotsman*, 26, VII., 09).

LANCASHIRE.—One was caught with wing damaged, probably by flying against a telephone wire, at Brinscall on July 16th (*W. Mackay Wood*).

CHESHIRE.—One (female or young) seen by Mr. W. V. Wenner, who knows this bird well in captivity, on Alderley Edge, on July 11th (*T. A. Coward*).

- HEREFORDSHIRE.—A flock of ten or twelve, of which one or two were in red plumage, seen at Pontrilas at the end of July (*W. S. M. D'Urban*).
- DEVON.—One found dead under a telegraph wire at Combe Martin "early in July" (*W. S. M. D'Urban*).
- YORKSHIRE.—Many, both old and young, were seen at Dalton and Beverley on July 15th. The crop of one contained a green viscid mass, "which the foreman of the Beverley nursery-gardens, who was trained under the eye of the late Mr. George Swailes, declared to be green fly, which he had seen the birds feeding on" (*E. W. Wade*). About the middle of July one was seen near Brough (*Nat.*, 1909, p. 280, footnote).
- LINCOLNSHIRE.—A flock of about a dozen was seen at Louth on July 14th (*C. S. Carter, Nat.*, 1909, p. 280).
- ESSEX.—A flock of eight or nine at Hockley during the first week of July (*F. W. Frohawk*).
- MIDDLESEX.—A flock of fifty seen (no date) at Northwood (*Field*, 24, VII., 09).
- KENT.—A dozen, two, and one (all flying), seen between Knockholt and Otford on July 30th (*H. G. Alexander*). A flock near Wye on July 29th (*C. J. Alexander*).
- SUSSEX.—Mr. Bristow received the first from the Hastings neighbourhood in the first week of July, and has since heard of or received birds from Brightling and Hawkhurst. At Ore Mr. Walter Field saw a flock of 30 first on July 26th. Mr. J. C. Arnold noted the first, a flock of eight, at Battle on July 13th, and saw eight on the 15th and 30 to 40 on the 17th (*N. F. Ticehurst*). About 14, of which at least one was in red plumage, were seen at Ashhurst from July 16th to 19th, and about 20 on the Downs on July 17th (*W. Walmesley White*).
- SURREY.—Some seen at Reigate on July 27th had evidently been at work on the larches for some time previously (*H. G. Alexander*).
- IRELAND.—One (which may or may not have been a migrant) was seen at Coleraine, co. Londonderry, on July 8th (*Field*, 17, VII., 09).

EDS.

## LATE NESTING OF THE CIRL BUNTING.

I HAVE lately spent a few days in south Devon and was surprised to find the Cirl Bunting in the district not only in great abundance but also in full song. I saw no sign of a hen bird at all, and as everything pointed to the fact that the

species was still nesting I decided to watch carefully, and if necessary, to search the hedgerows in the immediate vicinity of the "singing points."

On August 1st I was successful in observing a cock carrying food to his sitting mate. He did this every ten to twenty minutes, returning to his singing perch immediately afterwards.

The nest was beautifully concealed and contained five eggs which were quite fresh. The Cirl Bunting appears to have two or three "singing points" which are used periodically. This nest was perhaps ten yards from one of these, although the other alternatives were about sixty yards away. I succeeded in watching two more males carrying food, but owing to the nature of the ground was unable to follow them up successfully. Had I had more time, however, I feel sure I should have been able to establish this late nesting on a firmer basis than on the one case mentioned.

NORMAN GILROY.

#### ROSE-COLOURED STARLING IN LINCOLNSHIRE.

ON August 1st I saw a male Rose-coloured Starling (*Pastor roseus*) feeding on some late cherries in my garden at Cleethorpes, Lines. The bird remained in the vicinity of the cherry-trees all day, and was there early on the following morning, after which it disappeared. It was very wary, but by taking cover I got a good view of it from a distance of only a few yards and could see no signs of its having been in captivity. There was no wind and it rained heavily all day.

W. E. SUGGITT.

#### SHORT-EARED OWL BREEDING IN LANCASHIRE.

A PAIR of Short-eared Owls (*Asio accipitrinus*) bred on the moors near Brinscall, in May this year, within a very short distance of several large manufacturing towns. There is strong evidence that this species has bred in the same district for several years.

W. MACKAY WOOD.

#### LITTLE OWLS IN ANGLESEY AND WARWICKSHIRE.

WHILE on a visit to Penmon (N.E. Anglesey) last June, I was informed that a pair of small Owls had been seen by a keeper on June 15th. He now informs me that he has had further opportunities of seeing the birds, and from his description I think there is no doubt that the birds in question are the Little Owl (*Athene noctua*). Mr. H. E. Forrest (*Vertebrate*

*Fauna of North Wales*, p. 214) records one undoubted occurrence of this species in Anglesey in the winter of 1899-1900.

F. C. R. JOURDAIN.

I AM now able to record a Little Owl (*Athene noctua*) which was shot at Sheldon on November 15th, 1908, and preserved by Messrs. Spicer and Sons. This is only the second thoroughly reliable record of this species in Warwickshire, as I am unable to obtain further particulars concerning the specimen I recorded as shot at Sutton Coldfield (*cf.* Vol. II., pp. 240 and 344).

A. G. LEIGH.

#### COMMON BUZZARD IN SUSSEX.

A COMMON BUZZARD (*Buteo vulgaris*) was shot at in the neighbourhood of Battle, on June 8th. The bird, however, was not recovered till the 26th. when the wing and other parts of the body were sent to me for identification. One greatly deplors the slaughter of these fine birds, which, if unmolested, would perhaps again be often seen in the deep woodlands of east Sussex.

THOMAS PARKIN.

#### THE PEREGRINE FALCON ON THE YORKSHIRE CLIFFS.

I WAS interested in Mr. E. W. Wade's comments on my article in the July number on the above subject, and as accuracy on any matter of scientific interest is of the first importance, perhaps I may be permitted to offer a few remarks in reply.

Mr. Wade states that there is no room for doubt that the pair seen in 1904 did not remain to breed. I think I implied this in my remark that "it is thought they did not remain to breed," without too emphatically insisting upon it.

Mr. W. J. Clarke adds an interesting fact that a pair nested at Redeliff in 1901. This may have been the same pair seen at Speeton Cliff in 1904, which though they did not nest on the Bempton Cliffs may have passed on to that part of the coast between Scarborough and Filey and there bred.

Mr. Wade mentions that H. Marr has always maintained that two young birds only were reared in 1906 and 1907 respectively, while I stated that three were brought off in 1906 and one in 1907. H. Marr was also my source of information, as it was on that portion of the cliff where he has climbing rights that they nested on both occasions. I find in Mr. Wade's interesting pamphlet, entitled "The Birds of Bempton Cliffs," he states that "In 1906 the discovery was made that the birds had

bred and were rearing three young ones on H. Marr's ground when climbing began . . . and in due course the three flew safely from the nest." Marr's evidence apparently oscillates, and Mr. E. W. Wade may now be in possession of a more recent version.

A. D. SAPSWORTH.

#### OSPREY IN CO. SLIGO.

MR. J. HENDERSON reports the occurrence of a fine Osprey (*Pandion haliaëtus*), seen by him on May 29th, 1909, on Lough Arrow, co. Sligo. This is a very late date for a bird on migration northward, but though there is no record of the breeding of this species in Ireland, Messrs. Ussher and Warren mention several instances of its occurrence during the summer months, while recent records were summarized on p. 414 of Vol. II. of this Magazine.

F. C. R. JOURDAIN.

#### WHITE STORK IN KENT.

ON July 19th I saw in Romney Marsh, in Kent, a fine adult White Stork (*Ciconia alba*). It was standing in some swampy ground, together with some Herons, and, when it rose, its red legs and bill showed up well as I watched it through the binoculars. It was very wild.

C. B. TICEHURST.

[Although this may have been a perfectly wild bird, so many such birds are kept in semi-captivity without being pinioned, that records must now be received with caution. At Kew Gardens, for instance, the Storks have reared young, we believe, every year for a considerable time, and these, some of them several years old, fly about freely, and it is questionable if one would be missed should it fly away altogether.—H. F. W.]

#### SPOONBILL IN YORKSHIRE.

It may be of interest to note that on the afternoon of August 15th, while in company with a friend (Dr. Compton), I noted a Spoonbill (*Platalea leucorodia*) on the north shore of the Humber. During the last twenty years this is only the second I have seen in this district. The bird on taking wing flew in a southerly direction.

STANLEY DUNCAN.

#### WATER-RAIL CARRYING AWAY ITS YOUNG.

THE behaviour of the Water-Rail described by Miss Turner in the last number of BRITISH BIRDS, is not, I think, unusual in a bird that is uneasy, and thinks itself watched when



hatching. Most bird-observers and alas! most bird-keepers have had only too many similar experiences. The action of the Water-Rail may, I think, be compared to that of a bitch, cat, rabbit or ferret, all of which will remove or eat their young when disturbed. The domestic fowl will also do it, and I have seen a Wild-Duck, when suddenly surprised while her eggs were hatching, pick up a young one and carry it some yards.

E. G. B. MEADE-WALDO.

#### LATE NESTING OF THE WOODCOCK.

A GOOD many Woodcock breed in Morayshire, and in May I saw, or was told of, five or six nests in the woods adjoining the house, which had all hatched successfully by May 20th. They were, I think, first broods, as this is an exceptionally late season. On August 5th the head-keeper informed me that a Woodcock was sitting on four eggs close to his house, while another nest had hatched off on the previous day. Two days later the first nest hatched off, the old bird going away with two young and leaving two chipped eggs behind. Probably a closer search would have resulted in the discovery of more nests, as in 1907 I was shown a nest at an even later date.

J. DAVIDSON.

#### BLACK-TAILED GODWIT IN WIGTOWNSHIRE.

WHEN watching for birds on the shores of Luce Bay on August 13th a couple of Godwits flew up and pitched within twenty to thirty yards of me.

One of them was almost, if not quite, in summer plumage, and I felt sure from its size was a Black-tailed Godwit (*Limosa belgica*).

I was soon able to confirm my suspicion as the bird began to clean itself, constantly raising its wings and showing the black tail in contrast to the white lower rump. From time to time also it flew a few yards, giving me a good view of the conspicuous white wing-bar.

The second bird was in immature plumage, being brownish-grey all over with dark markings, and I was unable to detect the white wing-bar when it flew; but as the two birds sat at one time within a foot of each other I could see that there was practically no difference in size and have no doubt that it belonged to the same species.

M. BEDFORD.

#### NUMBER OF EGGS LAID BY TERNS.

I SHOULD imagine that in the case of the Terns as with other species, the number of eggs laid is to a certain extent regulated

by the food-supply, which varies considerably in different districts.

In my experience the Common Tern does not vary so much as the others—about 85 per cent. of nests contain three eggs. In the case of the Sandwich Tern clutches of three are very rare in one large colony known to me—perhaps one per cent. of the whole, while in another well known one the proportion is very much larger. In a third small one, in a very out-of-the-way spot, but where food is abundant, 99 per cent. of the nests usually contain three eggs.

The same applies to the Arctic Tern. On the Farne Islands in 1907 I saw only two nests out of 101 with three eggs—90 containing two, and nine one egg, whilst on the island of Sanday (Orkney) where the species is abundant, although the colonies are small, I noticed in one colony 20 nests with three eggs; 10 nests with two eggs; 10 nests with one egg; and in another, 13 nests with three eggs; one nest with two; and one nest with one egg. Of course a proportion only of the nests was found.

NORMAN GILROY.

\* \* \*

PROTECTION IN NORFOLK.—The report by Mr. C. A. Hamond of the Wells Wild Bird Protection Society for 1908, shows what successful results can be achieved by the employment of watchers. Terns and other birds have undoubtedly increased, 400 or 500 pairs of Common Terns having nested in the area watched during 1908, while Black-headed Gulls returned to an old breeding place (Mow Creek), after an absence of seventy years! We have always thought that such one-time British breeding birds as the Ruff, Black Tern, Spoonbill, Bittern, and we are afraid there are many others, would return to (or rather would stay in, for they certainly often return to) old breeding haunts, which are still suitable, if they were efficiently protected.

YELLOW-BROWED WARBLER IN SCOTLAND IN SPRING.—A specimen of *Phylloscopus superciliosus*—the first observed in this country in the spring—was satisfactorily identified by Mr. George Stout, who has become familiar with the bird in Fair Isle, on April 11th, at Lockerbie, Dumfriesshire (*Ann. Scot. Nat. Hist.*, 1909, p. 182).

WHITE WAGTAIL ON THE EAST COAST OF IRELAND.—In Vol. I., p. 111, we noted that *Motacilla alba* had only twice been recorded from the east coast of Ireland; it is therefore interesting to have some further records from Mr. Alexander

Williams (*Irish Nat.*, 1909, p. 121). These refer to County Dublin, and are briefly as follows:—In April, 1904, a friend of the author so accurately described two pairs of Wagtails which were frequenting the gardens of the Ringsend Coast-guard Station that there seemed little doubt that they were White Wagtails. On April 24th (two days later), Mr. Williams himself saw and identified at ten yards distance, four White Wagtails on the shore near Malahide. It was not until April 26th, 1908, that Mr. Williams again saw a White Wagtail, and this was a single bird at Dollymount. The identification of this last bird was confirmed by Mr. W. J. Williams, who knew the species well in Norway.

GOLDEN ORIOLES IN YORKSHIRE, SCOTLAND AND IRELAND.—Mr. F. M. Burton records (*Naturalist*, 1909, p. 268), that he watched an example of *Oriolus galbula* near Gainsborough on the 12th “instant” (? June). A male was observed in a garden in Renfrewshire in the first half of May, and was afterwards found dead (W. Horton, *Ann. Scot. Nat. Hist.*, 1909, p. 182). An adult male was also shot on April 24th, near Dunmanway, co. Cork (F. R. Rohu, *Irish Nat.*, 1909, p. 183).

NESTING OF HAWFINCH IN SCOTLAND.—A pair of *Coccothraustes vulgaris* built two nests and laid eggs in May, 1909, near East Linton, in East Lothian. Unfortunately disaster attended both efforts, and no young were reared (W. Evans, *Ann. Scot. Nat. Hist.*, 1909, p. 181). Only one nest had previously been found in Scotland (*cf. supra*, Vol. I., p. 151). A young bird was found dead in East Lothian on July 3rd, 1908 (*cf.* Vol. II., p. 314). An adult Hawfinch was seen by Mr. W. Berry on April 21st at Newport, Fife (*Ann. Scot. Nat. Hist.*, 1909, p. 181).

HOOPOE IN SCOTLAND.—An example of *Upupa epops* occurred at Waternish, Skye, on April 27th (*Ann. Scot. Nat. Hist.*, 1909, p. 183).

GADWALL NESTING IN SCOTLAND.—The Misses L. J. Rintoul and E. V. Baxter report (*Ann. Scot. Nat. Hist.*, 1909, p. 184) that in early June, 1909, two nests of *Anas strepera* were found on “a loch in the S.E. of Scotland.” The eggs, down and feathers have been satisfactorily identified. The Gadwall is a rare bird in Scotland and has only once before been positively found nesting, although it has been suspected of doing so on another occasion.

TURTLE-DOVES IN CO. WATERFORD.—Under this heading Mr. R. J. Ussher contributes to the “*Irish Naturalist*” (1909, p. 184) a long list of occurrences of *Turtur communis*, from

which it would appear that the bird is an increasing annual visitor (chiefly in May and June) to the county. Mr. Ussher remarks that it appears to visit co. Cork in the same way, but that it has not yet been known to breed in these counties.

**SAND-GROUSE IN YORKSHIRE.**—Mr. Arthur Pratt (for whose knowledge of the bird Mr. T. H. Nelson vouches) records in the "Field" (June 12th, 1909, p. 1028) that he saw nine *Syrhaptus paradoxus* on West Coatham Marsh, near Redcar, on May 17th, 1909.

**LITTLE CRAKE IN SCOTLAND.**—On March 29th, 1909, an example of *Porzana parva* was caught in a fishing boat lying in Girvan Harbour, Ayrshire (James Aird, *Ann. Scot. Nat. Hist.*, 1909, p. 185). We believe this species has only once before been taken in Scotland.

**SPRING-MOULT OF THE ADULT GREAT NORTHERN DIVER.**—Mr. F. W. Smalley contributes an interesting paper to the "Annals of Scottish Natural History" (1909, pp. 139-144) relative to the spring-moult of *Colymbus glacialis*. His conclusions are in brief as follow:—

**ADULT WINTER PLUMAGE (MALE AND FEMALE.)**—This plumage seems retained only for a short time and is thus described:—*Head and upper Neck.*—Mouse-grey with a mixture of white on the lores, round the eyes and sides of neck. *Upperside.*—Dark blackish-grey, with two indistinct lighter grey spots on each feather. *Tail-feathers.*—Black with white tips. *Primaries and Secondaries.*—Black. *Underside.*—White with a dark mouse-grey band across the vent.

**ADULT SUMMER PLUMAGE.**—Acquired by a complete moult which appears to commence in December and become complete in May, but varies in individuals. Judging by *one bird* killed on February 18th, the whole of the remiges are moulted at once at this time of year. During the moult the bird assumes a strangely mottled appearance, due to the interspersing of new summer feathers, and the head is the last to moult. The full summer plumage is thus described:—

*Head, Throat and Neck.*—Deep glossy black with purple and green reflections; on each side of the neck and across the throat lateral lines of white forming transverse bars. *Upperside.*—Glossy black: each feather with two large white spots towards the tip. *Tail, Primaries, and Secondaries.*—Black. *Belly.*—White with a narrow band of white-tipped black feathers across the vent.

**RED-NECKED GREBE IN ORKNEY.**—Mr. H. W. Robinson now records that in Loch of Harray he saw several *Podiceps griseigena* on March 2nd, 1904; a pair on February 28th, 1905; and in the Bay of Ireland a single bird on April 10th, 1908 (*Ann. Scot. Nat. Hist.*, 1909, p. 185).

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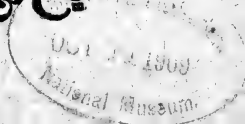
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## OBSERVATIONS ON THE MIGRATION OF BIRDS IN THE MEDITERRANEAN.

BY  
COMMANDER H. LYNES, R.N., M.B.O.U.

*(Continued from page 104.)*

### III.—MIGRATION AT SEA.

IN the following remarks it will doubtless be observed that much old ground is gone over, but I am loath to leave merely to inference such characteristics of the

migration passage across the Mediterranean, as are accepted, more or less universally, as rules governing the phenomenon of migration, because it seems to me that not only do spring and autumn passages across the same area differ *inter se*, but that in many important features each migration area possesses characteristics peculiar to itself. I think, for instance, that the passage across the Mediterranean differs a great deal from that across the North Sea at the same season, while the dissimilarity of the spring and autumn migration in the latter area makes itself sufficiently apparent in all our records. For an explanation of the former we may, perhaps, look to the physical geography, past and present, of the areas under consideration—their climate and their position with reference to the breeding and winter quarters of the migrants themselves.

During our two-and-a-half years in the Mediterranean, July and February were actually the only months of the year in which the ship never fell in with birds other than regular sea-frequenting species, but for all practical purposes one may say that from mid-December to mid-March, and from mid-June to mid-August, migration over these waters is apparently in abeyance. I say apparently, because in August, if not in July, there must surely be numbers of *Limicolæ* crossing the Mediterranean, although not a single representative of that great order ever visited us at sea at any period of the year, an interesting fact which coincides with records from other sources, and doubtless has its own bearing on the mode of passage of this particular group of birds.

During the rest of the year it was seldom that a cruise, however short, would pass by without our being able to record some migrant visitors to the ship—birds whose presence in such uncongenial surroundings would have seemed strange indeed, had we failed to realise that they were merely the strayed representatives of a feathered concourse travelling between their winter and summer quarters.

SOME OF THE BIRDS OBSERVED BY H.M.S. "VENUS" AT SEA IN THE MEDITERRANEAN  
Between August, 1905, and January, 1908.

NOTE.—Each column contains the species (or genera, etc.) arranged as far as possible in relative order of merit.

MOST COMMONLY.	FREQUENTLY.	OCCASIONALLY.	SELDOM.	NEVER.
Yellow-bellied Wagtails ( <i>Budytes</i> Group) Hoopoe Nightjar Wheatear *Quail	Turtle-Dove Swallow Whinchat Willow-Warbler Lesser Whitethroat Whitethroat White Wagtail Kestrel Tree-Pipit Nightingale Spotted Flycatcher Wood-Warbler Land-Rail	Cuckoo Bee-Eater Roller Reed-Warbler Sedge-Warbler Woodchat Pied Flycatcher *Water-Rail Spotted Crake *Baillon's Crake Thrush Redstart Buntings Finches Peregrines and their allies Sparrowhawk	Tree-Sparrow Larks ( <i>Alaudide</i> ) Grey Shrikes Golden Oriole	Bluethroat Swift Blackbird Starling Crows ( <i>Corvide</i> ) Kingfishers Tits Nuthatches Woodpeckers The following Orders:— <i>Anseres</i> <i>Limicolæ</i> <i>Striges</i>
			The following Orders:— <i>Steganopodes</i> <i>Gallinæ</i>	

\* Only met with very close to land.

In the preceding table will be found a list of the species that occurred at sea in the Mediterranean during the two and-a-half years ; either flying by, flying around, or settling on board the ship.

It seems that there are three broad routes or zones normally traversed by migrants crossing the Mediterranean, somewhat on the lines indicated in Figure VI.

I. The Gibraltar zone (in which possibly the Balearic Islands may be included, but I have no information about this group).

III. The Italy-Sicily, Corsica-Sardinia, Malta-Tunis zone.

V. The Levant zone.

This leaves the two large sea-areas (II. and IV.) between the three zones normally untraversed except near the coast-lines, and our "Venus" observations agree with these divisions.

In II. and IV., abnormal conditions of weather, which, as will be seen, produced such large bird visitations in the other zones, never brought any but a chance bird or two to the ship, indicating clearly that the sea-areas are not normally traversed by, at any rate, those species whose presence in such circumstances may be expected in the other zones, I., III., and V.

But it is not at all my intention to give the reader the impression that we always fell in with the birds mentioned in the list during the migration seasons, wherever and whenever the ship happened to be cruising in areas I., III. and V. On the contrary, except within a very few miles of the land, no migrating birds of any species (excepting, perhaps, the Pelicans mentioned later on) were ever seen at sea whose presence could not be clearly ascribed to abnormal causes, and even so, their numbers varied inversely as (perhaps the square of) their distance from the land.

Considering the Port Said district alone, at fifteen miles north of the place, if all the birds that arrived in daylight had travelled across the sea sufficiently low



to be visible to the naked eye, then, from 6 to 8 a.m. any day during September, there ought to have been a constant stream of birds, of perhaps thirty different species, flying past the ship. But there was not.

Even Quail, which habitually make the land only a few feet above the water's surface, did not seem to have crossed the Mediterranean in this fashion. At three miles from the land a good many Quail did pass the ship, flying past her at their business-like fifty miles an hour, taking no notice of the ship at all; these birds were travelling under normal conditions and knew where their goal was perfectly well. (The tops of the houses would have been visible to a bird flying just above the water's surface from a distance of about twelve miles.)

At fifteen miles or more from land, whether in Egyptian or other Mediterranean waters, we never found this state of affairs; on the contrary, Quail were remarkable by their absence. At 2 p.m. on September 17th, 1907, in clear weather, a Quail came flying round the ship, and eventually went away to the *northward*, absolutely lost, in spite of the fact that Malta was only twelve miles to the southward.

I feel no hesitation, therefore, in saying that in the Mediterranean, when birds are seen at sea outside of a very few miles from the coast, their appearance is due to abnormal causes; they have lost their way, and see something to break the monotonous expanse of water, so fly towards it; they are exhausted and must needs rest at all cost or drop into the sea; they cannot face the head-wind that has suddenly sprung up and are loath to turn back, and doubtless many other such reasons force them to the ship.

In short, there is nothing whatever in the migratory passage across the Mediterranean, considering that sea as a whole, to correspond to the low altitude, and consequently visible passage, of certain species across the North Sea, for instance, as is graphically described by Mr. Eagle Clarke in the "Ibis" for January, 1904.

I say "considering the Mediterranean Sea *as a whole*," because I do not wish to include in the above statement out-of-the-way corners of the Mediterranean which we did not visit, for these may very likely have a subsidiary migration character of their own; indeed, an instance of such can be quoted that came under my own observation.

During September, 1906, H.M.S. "Scylla" was at anchor off Alexandretta, in the Gulf of Iskanderun, at the very north-east corner of the Levant. For an hour or so during the forenoon (from memory I think it was about 10.30 to 11.30) for several days in succession, there was a considerable stream past the ship of White Storks, about eight or ten every hundred yards, steering a dead straight south-easterly course. They appeared to be flying in rather a leisurely way, between ten and fifty feet above the surface of the water, and were obviously just crossing, by the shortest route, the mouth of the gulf, a distance across the water of some twenty-five miles. On reaching the far shore of the gulf (our side), they stayed their progress a little to assemble, wheeling around and mounting higher and higher, about five thousand strong—an impressive spectacle. Gradually they drew away, still circling round and still apparently rising, until, finally, perhaps half-an-hour after the last of the pack had passed the ship, the whole concourse of Storks became lost to view at an immense height over the hills in the direction of Aleppo; an exact continuation of the birds' course across the gulf, and a line of flight which suggests that the Storks were bound for India *via* the Euphrates valley.

In the following pages are given some of the causes which account for the appearance of birds at a ship at sea in the Mediterranean.

#### *Cause I. Wind.*

Strong, adverse winds retard a bird's progress, fatigue it and drive it out of its course, of which we have ample

evidence from all over the world, and the Mediterranean is no exception, although I hardly think, from my own observations in the latter district, that mere wind in fine weather is to be looked on as the predominant cause of derangement of migration routine for the following reasons :—

A.—The principal migration routes of the Mediterranean are to a great extent dotted with land, and the chances of effecting a *pied-à-terre* should an adverse wind spring up are fairly good. Sea-distances are nowhere great. To be blown out into the Atlantic or other great ocean would be very different.

B.—Birds will undoubtedly not start on their flight across the sea if the wind is unfavourable, and although weather in the Mediterranean may be very local, there is generally a fair period of warning before strong winds, so that the chances are greater that birds will have a favourable passage, especially if the journey is not a very long one.

The effect of a strong head-wind upon migrating birds was very noticeable on May 2nd, 1907, in Palmas Bay, at the south end of Sardinia.

Here, day after day, during the months of April and May, in fine bright weather, very strong winds drive down from the mountains seawards during the day time, and subside again in the evening ; but they are quite local winds, and do not extend many miles to seaward. On this particular day the ship was manœuvring about Palmas Bay, and one of these very strong local winds sprang up from due north early in the afternoon. No migrants had been seen in the forenoon, but no sooner had the wind freshened than migrating birds started to appear—Redstarts, Wheatears and a Woodchat-Shrike beating up to windward, hugging the surface of the water to obtain the retarded velocity of air due to the water's friction. Quite a few of these birds settled on board, in spite of the fact that we were carrying out aiming rifle practice, and what struck me as more remarkable still,



that the ship was in the middle of the bay with land all round except from south-eastward to south-westward.

Another interesting occurrence connected with wind took place when we were steaming along the south coast of Crete on October 7th, 1907. There was not a cloud in the sky, but a very strong north wind was blowing, not a local wind, but one which extended very likely up to the African coast. We were only a few miles from the shore, so that we got into calm water, while the mountain ranges of Madara and Ida screened the ship from some of the wind, and entirely sheltered the sea within a mile of us landwards.

At 5 p.m. a Swallow passed the ship, beating low against the wind, flying landward, due north. This bird had probably started from the south coast of Crete on his southward passage shortly before five o'clock, and finding the stern-wind too much for it, had wisely turned back before going too far. I believe it is generally accepted that a strong wind astern is as objectionable to a bird as the flood tide is to the navigator when entering a narrow harbour.

### *Cause II. Rain.*

From what I have seen, I believe that in the Mediterranean the chief factor in bringing birds on board ship, and the principal scourge of the migrant host, is rain; not steady settled rain, which generally lasts for some time and is preceded or accompanied by stormy weather, tending to prevent migrants setting out on their journey, but changeable weather with heavy thunderstorms.

These are just the conditions that prevail in the Mediterranean during the four months of the year in which the migration of birds across that sea is at its greatest intensity.

April showers, the sea calm, the wind light and variable, blue sky with light cirro-cumuli clouds; here and there a blurred nimbus cloud drawn down to the horizon,

denoting heavy showers all around—this is the sort of weather that takes a heavy toll of the feathered passengers across the waterway. Lured from the land by the deceitful appearance of the sun, by the light and pleasant breeze, they start their journey. Ere long, with the suddenness so characteristic of this class of weather, they find themselves in a deluge of rain, great heavy drops, one after another beating down their wing strokes and soaking their plumage. Their view obliterated—perhaps the greater consideration with species whose plumage by reason of its gloss or oily nature is less susceptible to wet than that of the majority of *Passeres*—little wonder the birds are forced to descend to lower planes. Then, what a piece of luck to find a ship to rest on to shake out the plumage and greet the re-appearance of the sun, for it has only been a ten-minutes' shower, but woebetide their less fortunate companions.

Hardly a single instance of a really abundant arrival of birds on board the "Venus" at sea in the Mediterranean (and I might also include the Red Sea and off the coast of Spain between Gibraltar and St. Vincent), but we were able to attribute it definitely to weather such as I have described. Indeed, so strongly do I feel impressed with a sense of certainty of the result effected by this sort of weather upon migrating birds that, accepting it as an axiom, I would infer from it that the fact of birds never appearing on board ship during thunder-shower weather in these two large sea-areas (II. and IV., Figure VI.) is satisfactory evidence that birds do not normally travel over those areas, and with regard to the observed fact that it is only when fairly close to land that birds come on board in *large* numbers, I would suggest that it is because they are normally over the central part of the sea during the night time, when a ship is invisible to them.

The following account, the facts of which were recorded directly after the events had taken place, will serve to illustrate my point.

At seven o'clock on the morning of April 29th, 1906, the "Venus" left Suda Bay, Crete, bound for Malta. There was little or no wind, the sun was shining brightly, with a few clouds here and there, the sea calm, with the remains of a north-westerly swell, probably the result of a recent "bora" in the Adriatic, as there had been no strong wind at Crete, and we subsequently had a calm passage the whole way to Malta.

In the middle of the afternoon we fell in with several short heavy showers, and it was evident from the nimbus clouds at several points of the horizon that there were local thunder-showers all around us, which equally obviously had an all-important bearing upon a tremendous visitation of migrants on board the ship. At 3.30 p.m. (this was just after our first shower) a Wood-Wren, in beautiful plumage, came aboard, very tired, but did not actually *look* wet. I tried to catch it in a butterfly net, but missed, and I am afraid the poor little creature dropped astern and perished. Then four Bee-Eaters appeared—also very tired—and settled in the fore rigging, and a female Wheatear flew around the ship.

At 4.30, when the ship was fifty miles from the west end of Crete and forty miles south of Cape Matapan, making about eleven knots to the westward\* there commenced a regular rush of migrants. Some Yellow-bellied Wagtails, a Redstart, a Turtle-Dove, and a Whinchat appeared; the latter settled aft, the Wagtails were shyer and only followed in the wake of the ship, uttering vibrating chirps, the others flew around the ship.

After this my observations were entirely confined to what was going on right aft on the quarterdeck, but we heard afterwards that there were also many birds forward, and, indeed, all over the ship.

At five o'clock two more Wood-Wrens came on board, and a party of seven Yellow-bellied Wagtails, which paddled nimbly about the quarterdeck searching for flies, which, unfortunately, did not exist.

\* See Figure VI.

The next few minutes brought some Turtle-Doves, Whinchats, a Wheatear and more Wagtails. The Turtle-Doves, I think, settled in the rigging, the Whinchats were quite tired out and could only sit miserably hunched up, and next day two of them were found dead in the boats.

About 5.30 Swallows started to arrive, and their numbers rapidly increased until Swallows were perched all over the ship in the most confiding way. They would crowd up together on the rim of a ventilator or a hatchway rail, heads and tails, as if to keep one another warm, and they did not mind us in the least when we walked up within a foot of them. They subsequently roosted all over the ship, several inside the chart-house, in the captain's cabin (half-deck); there must have been more than one hundred Swallows roosting altogether. Many were captured by the ship's company and liberated again. Although obviously very tired those Swallows that came under our particular notice did not seem to be wet, at any rate, not drenched.

After dinner some of the officers were walking up and down the quarterdeck, lighted by a single electric light underneath the awning; a Swallow hovered over them and actually settled on the head of one, who was wearing a cap with a white cover on it, put its head under its scapulars and went to sleep. The officer took his cap off and put it down on a grating; the Swallow just raised its head for a moment, then tucked it away again and was at once asleep.

Other arrivals at 5.30 included a Sparrow-Hawk, which flew around the ship, but was not observed to take any birds; several Pied Flycatchers, one a male in very fine adult plumage, and a rather wet male Subalpine Warbler. The Pied Flycatchers increased in numbers, and at dark, about seven o'clock, there were numbers roosting about the ship. Two, a male and a female, were brought to me from the captain's cabin, which they had entered through the open stern-door;

another was brought to me from forward (a young male of the previous year, I think) in a very exhausted condition, which I took to my cabin and endeavoured to feed with cockroaches. The poor little fellow was in such a state, however, that he could only crouch down panting, with eyes closed, a pitiable spectacle, and would not—probably could not—attempt to eat. I had to leave him thus in my cabin for a short time, and on returning I found he had disappeared and the food was untouched. The mystery was cleared up a few days later, when he came to light, a decomposing body, from behind the writing table.

We did what we could to feed our visitors, which, being unfortunately all insect-eaters, could only be supplied with one *plat*, viz., cockroaches; however, we were more or less successful as a good many birds came and ate them, running about the deck and snapping them up within a few inches of our feet.

The first to come to the feast was the Subalpine Warbler, which, with very little hesitation, hopped eagerly after the cockroaches thrown down to him and gobbled them with avidity. He ate at least a dozen, and we really thought he had overeaten himself. His example soon brought more birds, first a Wood-Wren, then a Tree-Pipit, which was not quite so tame, but managed a fair number of the outlying cockroaches, then a male Pied Flycatcher, which partook freely, and a very wet and wretched-looking Yellow-bellied Wagtail, which was shy at first, and, finally, a very bedraggled White-throat, which was either too frightened or too tired to join in the feast.

Of the five birds that I took for specimens (two Pied Flycatchers, male and female; two Whinchats, male and female; and one Wood-Wren), all had the stomach empty, excepting one of the Flycatchers, which contained a small quantity of something which certainly was not cockroach, so probably was the undigested remains of the last meal before leaving land.

I have noticed in dissecting some dozen birds which have died of exhaustion on board ship that in all cases the internal organs were shrunken, dry and dark coloured, the intestines being an almost black-coloured sticky pulp.

Although we did not pay special attention to it at the time, it seemed that the birds came from no particular direction, except perhaps that most were first *seen* beating up astern, *i.e.*, from the eastward. It is to be regretted that we did not follow more closely the departure of our visitors, but I think that all except the most exhausted birds pursued their journey before ten o'clock that night (when the ship was about seventy miles south-west of Cape Matapan), as the following morning none were visible, except those which had succumbed to fatigue or exposure during the night, and were picked up in various places about the boats and decks in the morning.

The following day the weather was quite fine and dry ; no birds came on board, except a stray Yellow-bellied Wagtail, which followed the ship, flying wildly around for about ten minutes, and then went off to the north-eastward, and a little later a Turtle-Dove, which did the same and then went off to the north-westward. Both these birds had evidently quite lost their bearings.

Now, what were the reasons for this great visitation of migrants to the ship and for their exhaustion ? A glance at Figure VI. shows that we were about one hundred and eighty miles from the nearest land south, the coast of Barca ; about sixty miles south-south-west of Cape Matapan, and forty-five to ninety west of Crete.

It seems obvious that these birds can have had no connection with Crete as a starting point, as there was no reason to account for their being so much out of their course ; neither does the suggestion that they had been blown over from the westward hold any weight, since there had been no wind during the past twenty-four hours, besides which immediately to the westward of us lay an area of little or no migration passage (zone IV.), separating

us from the Malta-Sicily route by some three hundred miles. The birds must have come from the African coast, perhaps even so far to the eastward as Egypt, but that is merely a surmise.

Now, the north-westerly swell was certainly not the result of a wind that had existed near those longitudes during the past twenty-four hours at least, for it was not of such a nature, and we should also have had something of it at Crete, which we did not; therefore, it may be accepted that at no time of their flight since their departure from the African coast had these migrants been subjected to adverse winds, consequently nothing remains but the rain to explain the whole phenomenon.

The time of day is worthy of note; as will be seen, it agrees with our observations as to time of arrival of migrants on the north coast of the island of Crete.

I have often looked out and wondered why one does not see dead birds which have met their death in crossing the Mediterranean floating about in the sea, but, of course, they would be very inconspicuous objects.

On June 7th, 1906, a date on which there would be little or no migration in progress, in the Straits of Gibraltar the ship became enveloped in a terrific thunder-storm, that lasted for half an hour, during which time we could not see more than a hundred yards around us. There was no wind. A Turtle-Dove came on board, as absolutely soaked as if it had been held under a tap, and a bedraggled Reed-Warbler (or, possibly, a *Hypolais*—I only got a hasty glimpse) also took refuge in the rigging.

At the same time quantities of oleander hawk-moths were apparently being borne down from some higher atmospheric stratum, and many could be seen floating in the sea. I looked out for dead birds as well, but saw none, though could not help thinking that had the storm occurred during migration time we should have seen some, in spite of its being so close to land on either side.

Off the north coast of China in summer it is a common occurrence to see immense migratory streams of dragon-

flies (locally called typhoon flies), and the sea is sometimes strewn with their corpses. The upper strata of the atmosphere, judging from the actions of Swifts, Black-headed Gulls and many other species of birds, must frequently be full of insects. *Diptera* and other insects often appear on board a ship at sea, and I hazard the suggestion that insectivorous birds, especially those species that habitually take their food on the wing, may perhaps be able to obtain sufficient fuel for their locomotion to enable them to make considerably longer migratory flights than are generally attributed to them.

Rather opposed to this suggestion is the fact that it is the exception to find anything contained in the stomachs of birds taken on passage, but it must be remembered that digestion is very rapid.

Another occurrence of some interest, which may be put down to the influence of rain on migration, was as follows :—

On September 8th, 1907, the “Venus” was about fifteen miles to the south-westward of the Dardanelles. During the previous night it had been blowing hard from north-east to north-north-east in the Sea of Marmora and Aegean Sea, accompanied by heavy showers. The wind was still very fresh from the same direction, when, at 11 a.m., a party of migrants, amongst which were recognised House-Martins, Swallows and a Nightingale, flew by the ship, hugging the surface of the water, going about *north*, that is with the wind two points on the bow, progressing, of course, very slowly.

Later in the day another *Hirundo*, doing the same, was seen in the distance.

The points about this that seemed remarkable were :—

- (1) The birds were flying north instead of south.
- (2) They were not flying in the best direction to make the land, which they were presumably trying to do.

The latter points to the fact that they had quite lost their bearings ; their position, coupled with the time of day, which does not fit in with the time of departure as



calculated from Egypt arrivals (except perhaps the smaller evening arrival there), seems quite abnormal, and I can only suggest was connected with the stormy weather during the previous night.

Herr Gaetke, in his "Die Vögelwarte Helgoland" (p. 129, English translation), mentions a few rare instances of birds, such as Thrushes, Buntings and Finches, taking a rest on the water, and suggests that the habit may be occasionally indulged in by such families of birds if exhausted.

The only like instance from the Mediterranean that I can quote is that of a flock of Pelicans, a species essentially associated with water, either salt or fresh.

This happened on March 27th, 1897. H.M.S. "Scylla" was steaming from Malta to Port Said, and, being somewhere to the north-westward of Alexandria at 5 p.m. on this calm and sunny afternoon, there came a hail from the man at the masthead of "Shoal on the starboard bow." Knowing that the ship was in the middle of the Levant, and that the nearest land was quite one hundred miles away, this report was naturally received on the bridge with a certain amount of suspicion. However, as the ship continued on her course, it became evident to those on the bridge that there was indeed a shining white patch about an acre in extent on the bearing indicated.

The ship's course was altered for this patch, which turned out to be a compact flock of about five hundred Pelicans, seated on the water, apparently enjoying a rest.

These birds were presumably on their northward migration, and since the weather conditions were entirely favourable to migratory passage, the inference seems to be that Pelicans normally have the habit of resting on the water during their passage.

As regards times of arrival on board. At night time, even in such weather as has been described as favourable to such visitations, birds do not, so far as my experience goes, come on board ship, probably because they cannot see her. Even a brilliantly lit liner would only show

light to a bird overhead over a very small area, while the ordinary navigation lights that ninety per cent. of ships carry must be to all intents and purposes invisible. The same, most likely, applies to foggy weather, but we only twice experienced fog in the Mediterranean during the migration seasons. When burning searchlights at night, birds are frequently attracted to the beam, which resembles that from a lighthouse or lightship. If the birds made their passage at night at low altitudes, it would seem probable that the rows of lights from the ports of a man-of-war should attract a small percentage of birds; the fact that it is not so must have a bearing on the mode of passage at night across the Mediterranean.

In the day time, where rushes such as that described off the Grecian coast are concerned, the time presumably has a relation to the hours of normal passage of the various species across the Mediterranean, but times of strayed birds, as birds which come singly on board ship seem undoubtedly to be, can have no significance except to show by their very nature that they are the outcome of abnormal conditions.

ON THE DOWN-PLUMAGE AND MOUTH-COLORATION OF NESTLING BIRDS.

I.

BY

C. B. TICEHURST, M.A., M.R.C.S., M.B.O.U.

STONECHAT *Pratincola rubicola* (L.).

DOWN. *Colour*.—Dark grey.

*Character*.—Moderate length. Scanty on the spinal and humeral tracts.

*Distribution*.—Inner supra-orbital, occipital, humeral and spinal.

COLORATION OF THE MOUTH. Inside, yellowish; no spots; externally, flanges very pale yellow.

REDSTART *Ruticilla phœnicurus* (L.).

DOWN. *Colour*.—Dark grey.

*Character*.—Well marked and long, except in dorsal and humeral tracts, where it is short and scanty.

*Distribution*.—Outer supra-orbital, inner supra-orbital, occipital, humeral and spinal.

COLORATION OF MOUTH. Inside, lemon-yellow; no tongue spots; externally, flanges very pale yellowish white.

WILLOW-WARBLER *Phylloscopus trochilus* (L.).

DOWN. *Colour*.—Very light grey.

*Character*.—Fairly long and scanty.

*Distribution*.—Inner supra-orbital, occipital, humeral.

COLORATION OF MOUTH. Inside, orange; no tongue spots; externally, flanges very pale yellow.

WOOD-WARBLER *Phylloscopus sibilatrix* (Bechst.).

DOWN. *Colour*.—Light grey.

*Character*.—Fairly long and scanty.

*Distribution*.—Inner supra-orbital, occipital, humeral.

COLORATION OF MOUTH. Inside, yellow; no tongue spots; externally, flanges yellowish.

REED-WARBLER *Acrocephalus streperus* (Vieill.).

DOWN. Absent. Skin of body very dark.

COLORATION OF MOUTH. Inside, orange; two long oval, symmetrical, black tongue spots at base of tongue; externally, flanges lemon-yellow.

PIED FLYCATCHER *Muscicapa atricapilla*, L.

DOWN. *Colour*.—Dark grey.

*Character*.—Scanty, moderate length.

*Distribution*.—Inner supra-orbital, occipital, humeral and spinal, few tufts on centre of spine only.

COLORATION OF MOUTH. Inside, orange-yellow; no tongue spots; externally, flanges pale yellow.

SPOTTED FLYCATCHER *Muscicapa grisola*, L.

DOWN. *Colour*.—Grey.

*Character*.—Well marked, fairly long and plentiful.

*Distribution*.—Outer supra-orbital, inner supra-orbital, occipital, humeral, spinal, ulnar, femoral, the last two being scanty.

COLORATION OF MOUTH. Inside, orange-yellow; no tongue spots; externally, flanges pale yellow.

REED-BUNTING *Emberiza schoeniclus*, L.

DOWN. *Colour*.—Greyish black.

*Character*.—Fairly long and abundant; tracts well marked.

*Distribution*.—Inner supra-orbital, occipital, humeral, spinal, ulnar, femoral, crural, ventral, the last consisting of two filaments only.

COLORATION OF MOUTH. Inside, pinkish; no tongue spots; externally, flanges white.

GREEN WOODPECKER *Gecinus viridis* (L.).

DOWN. Absent.

COLORATION OF MOUTH. Inside, pink; no tongue spots. Externally, flanges whitish; on the lower mandible the gape close to the angle is modified into a hard roundish cartilaginous lump.

STOCK-DOVE *Columba œnas*, L.

DOWN. *Colour*.—Rusty yellow.

*Character*.—Long and hair-like, each filament being "unbranched."

*Distribution*.—Over all the feather-tracts except on the chin and ear coverts.

COLORATION OF MOUTH. Inside, flesh pink; externally, flanges whitish.

BILL. Black with a white tip; "egg-cracker" same colour as the down.

ROCK-DOVE *Columba livia*, J. F. Gm.

DOWN. *Colour*.—Pale canary-yellow.

*Character*.—As in the last.

*Distribution*.—As in the last.

COLORATION OF MOUTH. Inside, flesh pink; externally, flanges whitish.

BILL. Dirty, flesh colour with a white tip and subterminal ring of black; "egg-cracker" same colour as the down.

## II.

BY

A. GEOFFREY LEIGH.

SINCE Dr. C. B. Ticehurst's article on the subject of Down-Plumages appeared in BRITISH BIRDS (Vol. II., p. 186), I have paid a good deal of attention to the distribution of the down of nestling birds, and it may be of interest to give particulars of the distribution of down in those nestlings which I have examined which were not described in the article referred to.

First, however, I would call attention to the fact that Dr. Ticehurst appears to have overlooked the presence of down in the femoral tract of the nestling Swallow (*Hirundo rustica*). I have examined two broods of these birds, and found down in this tract moderately well developed in all the young.

WHINCHAT *Pratincola rubetra* (L.).

DOWN. *Colour*.—Grey.

*Distribution*.—Inner supra-orbital, occipital, humeral and spinal.

COLORATION OF MOUTH. Inside, lemon-yellow; no spots.

BLACKCAP *Sylvia atricapilla* (L.).

DOWN. Absent.

REED-WARBLER *Acrocephalus streperus* (Vieill.).

DOWN. Absent.

COLORATION OF MOUTH. Inside, orange; black tongue spurs.

TREE-PIBIT *Anthus trivialis* (L.).

DOWN. *Colour*.—Dark grey.

*Distribution*.—Inner and outer supra-orbital, occipital, humeral, spinal, ulnar, femoral and crural.

COLORATION OF MOUTH. Inside, lemon-yellow ; no spots.  
N.B.—When the nestling is about four days old the mouth becomes deep carmine.

RED-BACKED SHRIKE *Lanius collurio*, L.

DOWN. Absent.

COLORATION OF MOUTH. Inside, lemon-yellow ; no spots.

SPOTTED FLYCATCHER *Muscicapa grisola*, L.

DOWN. Colour.—Dark grey.

Distribution.—Inner and outer supra-orbital, occipital, humeral, spinal and femoral.

LINNET *Linota cannabina* (L.).

DOWN. Colour.—Grey.

Distribution.—Inner supra-orbital, occipital, humeral, spinal, ulnar, femoral, ventral and crural.

COLORATION OF MOUTH. Inside, deep orange ; no spots.

YELLOW BUNTING *Emberiza citrinella*, L.

DOWN. Colour.—Grey.

Distribution.—Inner supra-orbital, occipital, humeral, spinal, ulnar, femoral, ventral and crural.

COLORATION OF MOUTH. Inside, lemon-yellow ; no spots.

REED-BUNTING *Emberiza shæniclus*, L.

DOWN. Colour.—Dusky black.

Distribution.—Inner supra-orbital, occipital, humeral, spinal, ulnar, femoral, ventral and crural.

COLORATION OF MOUTH. Inside, salmon-pink ; no spots.

JACKDAW *Corvus monedula*, L.

DOWN. Colour.—Buffish grey.

Distribution.—Humeral, spinal, femoral and ulnar.

COLORATION OF MOUTH. Inside, deep orange ; no spots.

WOOD-PIGEON *Columba palumbus*, L.

DOWN. Colour.—Straw.

Distribution.—Covering all the feather-tracts except the auriculars and on the chin.

COLORATION OF MOUTH. Flesh colour.

BILL. Dark brown with white tip.

I should also like to call attention to Mr. Collingwood Ingram's description of the nestling Marsh-Warbler (*A. palustris* (Bech.)) in the "Field," April 4th, 1908, p. 583 :—

DOWN. Absent : skin of body very dark.

# NOTES

## THE MEANING OF BIRDS' SONGS.

IN the September number of *BRITISH BIRDS* (p. 121) Mr. Kirkman disagrees with Dr. Lowe's explanation of bird-song. We have always been told that all songs of birds are simply the expression of sexual emotion. This is the explanation usually accepted. While not holding this opinion myself I cannot for a moment accept Mr. Kirkman's alternative that the bird "sings to please himself." So far as I have ever observed the bird has had no alternative. I have been studying the subject for some years, and am strongly of opinion that song is always the ebullition of superfluous energy, and has no *direct* connection with sexual matters.

The case of the House-Sparrow may be taken as an example. [For some reason this species was not mentioned either by the Messrs. Alexander in their paper on "Song-Periods" in *BRITISH BIRDS* (Vol. I., pp. 367-372), nor by Mr. Gyngell in his contribution on the same subject to the *Naturalist* (1908, p. 181).] The bird sings all through the year with the exception of the period of rearing the young; the season of moult; certain damp, dark, or foggy days in winter; and when a heavy fall of snow makes the task of securing food so arduous that there is no energy left for song. Indeed, in all birds, the song-period is coincident with a time of plenty. In November, when the Sparrow is in full song, the males are certainly incapable of any sexual feelings if the physiology of the bird is to be any index. As everyone who has dissected a Sparrow will remember, the essential organs in spring are probably not less than fifty times bigger than they are in a bird examined in mid-winter.

The best way to make a bird sing is to adopt the methods that are used by bird-fanciers all over the world. Feed it well, keep it in good health, and close all outlets for its energy except the one of song. Even yet, birds are subjected to the atrocious process of blinding, for it is known that they sing the better for it. The darkening of the cage has the same effect. In either case it depends on the stopping of one or more outlets for the carefully stored energy of the bird. Female birds, when deprived by age or other causes of the opportunity of expending their superfluous vitality in egg-production, are said to sing well.

When the male bird assists in the rearing of the young he finds another outlet for his energy, and this is the explanation of the cessation of song in May or June, and also of the occasional outbursts from birds whose nests have been robbed. Once through the moult, and free from the arduous duties of the nursery, the abundance of food in late summer explains the well-known autumnal songs of so many birds. This is by no means confined to the *Passeres*. I have often watched Coots, Grebes, Grouse, Snipe, Lapwings and several other birds going through their so-called "love performances" in August, September, October, and even later still. This phenomenon is always dependent upon the abundance of food, and the scarcity of enemies to repose. It is an interesting fact, and one that can hardly be a mere coincidence, that the commonest birds have the most extended song-periods. This is exactly what one would expect under the theory that song is the result of superfluous vitality.

Song must be a useful guide to the female in her choice of a mate. In choosing the noisiest she is unconsciously securing the male with the most superabundant energy. When the young are hatched this stored-up vitality will be turned into another more useful channel. And if the male takes no part in the rearing of the young the song is still useful to the species in another way. The whereabouts of the singer is evident to birds or animals of prey, and the useless bird is bundled off the scene to leave more room for the coming chicks. At least, this would be Stolzman's explanation. It is surely going too far to grant æsthetic tastes to birds when the most generous of us cannot allow them in by far the greater number of our own species. The human animal, when he sings *instinctively*, acts under exactly the same impulse that moves the bird. Surely sex has nothing to do with the singing of children, or with the half-conscious humming of an adult engaged in a simple task!

It would take up too much space to cite instances in support of the statement that bird-song is not connected except indirectly with sexual affairs, and that it is at all times and in all birds nothing but the overflowing of the vitality that cannot be stored or used up in any other way. But bearing this explanation in mind it should not be difficult to understand many of the puzzles that are quite insoluble by means of the present theories of song.

FREDK. J. STUBBS.

A YOUNG Robin—one of a brood hatched in May—comes daily into our house in search of food. Having satisfied its



hunger, it sometimes perches near the fire, where its sings two or three times before departing.

AUGUSTINE REES.

### MARSH-WARBLER BREEDING IN WORCESTERSHIRE.

MR. W. DAVIES writes to us that while spending a holiday in Worcestershire he noticed on May 23rd a song which quite puzzled him. He saw the singer, and watching it closely came to the conclusion that it was a Marsh-Warbler (*Acrocephalus palustris*). In subsequent walks in the neighbourhood he met with several other birds with the same song; in fact he states that he considers the bird "quite common" in this district. "They were distributed over an area of several miles. I found them chiefly along hedgerows adjoining fields of wheat and beans. There was in most cases a ditch along the hedge, in some cases with water but in others dry, but in all cases there was a luxuriant growth of coarse herbage." Moreover Mr. Davies affirms that he did not meet with a single Reed- or Sedge-Warbler during his stay in the place.

He did not himself discover a nest, but Mr. F. Coburn, who spent a day or two in the neighbourhood, sends us the following account of his experiences:—

"It is with great pleasure that I am enabled this season to add a new breeding bird to the list for the Midland Counties, and that such a little-known species as the Marsh-Warbler (*Acrocephalus palustris*). For obvious reasons I withhold the name of the district where I found the birds breeding, further than to state that it was in Worcestershire.

"A friend—Mr. W. Davies—having described to me the song of a bird he had heard in Worcestershire I decided to investigate the matter, and on June 13th last, after much searching, I found one pair of the birds breeding.

"This being my first acquaintance with the Marsh-Warbler, it was intensely interesting to listen to the song of a bird I had never before heard. The spot where I found the birds was a strange one for Marsh-Warblers, and would have been unusual even for Sedge-Warblers. It was in an old orchard by a much-frequented roadside, used also for grazing cattle and as a fowl-run, and the only water for a considerable distance away was a brook dividing two orchards. There was no osier-bed, or anything approaching a marsh, for many miles, indeed the whole district is under high cultivation.

"I found the male bird singing in an old pear-tree, and lay down outside the orchard for two hours listening to the song and watching the birds.

“The song of the Marsh-Warbler once heard will never be forgotten; it cannot be mistaken for that of any other Acrocephaline bird I have ever heard. The bird is to a certain extent a mimic, and introduces into its song a few bars of those of the Nightingale, Linnet and Sedge-Warbler, connecting them with its own notes, but the song is always the same, the bars from the songs of other birds being always the same, and in the same order. I should not have regarded it as being altogether a mimicking song but that Mr. H. Eliot Howard assures me that in other districts, especially abroad where he has studied the bird, the song is composed of portions of those of other birds of that district; but he confirms my observation that the order of the song is always the same.

“To my eyes the Marsh-Warbler could not easily be mistaken for the Reed-Warbler. The under-side of the two birds I saw was of a clear and very pale yellow which would perhaps fade after death and render it somewhat difficult to distinguish from the skin of a Reed-Warbler. I have never examined a skin, but in life the Marsh- could never be mistaken for the Reed-Warbler, as it is thicker in build and as bold and lively as a Sedge-Warbler. It lacks the slender form and mouse-like creeping habits of the Reed-Warbler.

“At the base of the old pear-tree where I heard the male bird singing was a clump of stinging nettles and cow-parsnips, and in the middle of these I found the beautifully constructed nest containing five eggs, which had been incubated about four days. The nest was attached to the forked stems of the cow-parsnip and two nettles. Mr. H. Eliot Howard says that the nest is a typical one, as also are the eggs. The nest is very deep, and answers perfectly to some published descriptions. Both nest and eggs are so very distinctive that they are easily recognisable and could not be mistaken for those of any other bird I know.

“After the birds had found that their nesting site had been discovered their bold manner entirely changed, and they became quiet and exceedingly wary and skulking.”

[Mr. Coburn is in error in supposing that the Marsh-Warbler has previously escaped notice in the Midland counties, as the following extract by the late R. F. Tomes, in the “Victoria History of the County of Worcester,” Vol. I., p. 147 (1901), will show:—“A bird, which has subsequently proved to be the Marsh-Warbler, was known to visit the valley of the Avon in the counties of Warwick, Gloucester, and Worcester as a summer migrant more than thirty years since. The first one observed frequented some very high beans by the side of the

Avon at Welford, about five miles down stream from Stratford. Others were subsequently heard and seen, but it was not until the summer of 1887 that the species was satisfactorily determined, when two were shot by the author, whose attention was called to them by their unmistakable song and particular [*sic*] movements. Since that time others have been noted. In 1888 four were heard, all in the same neighbourhood, namely, in the valley of the Avon, near Littleton. After that date others were noted, and in the middle of June, 1892, a pair were seen by the author in some rank herbage in the bottom of a deserted stone-quarry, when, on search being made, a nest was found suspended between the stems of some nettles. But an animal of some kind had apparently rushed through the nettles and pushed the nest aside, so that it could no longer be made use of. It contained one egg. Another nest was speedily constructed near the spot, and was found to be suspended between the stems of some umbelliferous plants. The pair of birds were watched going to and from the nest until four eggs were laid, which with the one in the first nest made up the full number, and after an interval of a few days, during which no more eggs were laid, both nests with the eggs were taken. Since the date above mentioned the Marsh-Warbler has been repeatedly heard in the same neighbourhood, and no doubt remains that it is a regular summer visitor with us, though not in any considerable numbers. It is a thorough mimic, and has been heard to imitate the notes of the Skylark, Swallow, Sparrow, Chaffinch, Blackbird, Thrush, Starling, Partridge, and some others, which are mixed and blended with its own notes into a low but very sweet song. The precise spots chosen by the Marsh-Warbler are such as are frequented by the Common Whitethroat and the Sedge-Warbler, but it has not been heard in the reed-beds of the Avon.”—EDS.]

#### MARSH-WARBLER IN KENT.

As I was going up Godmersham Hill on June 11th, I heard a song of a Warbler unknown to me in a young ash plantation; on the 16th I again heard it and saw that the bird was an *Acrocephalus*; so on the following morning I went into the plantation and watched it for some time. I should not have known it from a Reed-Warbler by its colour, though I thought it looked slightly yellowish below; but its habits and song were quite different; it sang from exposed branches of some slender oaks and ashes left to form standards; it generally started its bursts of song with a note like a White-throats' alarm-note, then went to irregular notes something

like a Reed-Warbler's song, and when at its best frequently introduced a very clear and sweet phrase, unlike the song of any other British warbler.

I went again on the 26th, and Dr. C. B. Ticehurst on the 30th, but we neither of us came across it, so it presumably did not stay to nest there.

C. J. ALEXANDER.

#### NESTING OF AN APPARENTLY MATELESS SEDGE-WARBLER.

ON June 6th, on a small piece of swampy ground at Llandrillo, Merioneth, I found a Sedge-Warbler's (*Acrocephalus phragmitis*) nest with six eggs. On mentioning the fact to Mr. A. McL. Marshall, on whose ground the nest was, he expressed great surprise, as he had visited the spot nearly every day during the previous five weeks, and had never heard a Sedge-Warbler singing there. I, too, visited the spot nearly every day for a fortnight, and never heard a bird sing, nor did I see more than the one bird; finally, I examined the eggs, and found them unfertile after at least a week's incubation. The question arises, did this bird ever have a mate? If so, it may have lost it on migration, or soon after it arrived, and failed to find another. The Sedge-Warbler was certainly not a common bird in the district, as during a fortnight's ramble I did not come across another pair. Mr. Marshall tells me that a pair nest in this same spot every year. It seems to me that the probability is that the male bird never reached its breeding haunt, or else was killed soon after its arrival and before breeding commenced, otherwise the eggs, at any rate, would have been fertile.

C. B. TICEHURST.

#### RED-BACKED SHRIKE RETURNING TO NEST IN THE SAME PLACE.

THE bird referred to in my note (p. 116) was a Red-backed Shrike, with an injured foot, which returned to the same bush to nest for two years on Chipperfield Common; the third year the bird was there, but I was too early for the nest.

M. BEDFORD.

#### DEPARTURE OF HOUSE-MARTINS.

ON August 9th, between six and seven o'clock p.m., an assemblage of House-Martins (*Chelidon urbica*)—mostly young birds—took place in the vicinity of my house at Stocksfield-

on-Tyne and began to settle on the roof until I counted over eighty and many others kept coming in or flying round. Those on the roof were either preening their feathers or flying up in batches, then settling down again, whilst they kept up a continual twitter.

At seven o'clock precisely I heard a distinct sound like a pea-whistle proceed from one of the birds flying round, when instantly the whole of the Martins on the roof arose with one accord and began circling round ascending higher and higher until they were almost lost to sight, when they made off in a line direct southwards. Within ten minutes not one was to be seen. It was a beautiful calm evening.

J. S. T. WALTON.

#### LESSER REDPOLL NESTING IN ESSEX.

ON June 19th I found a nest of the Lesser Redpoll (*Linota rufescens*) in a lane two miles from Waltham Abbey on the main road to Nazeing Common. The nest was built about four feet from the ground in a small bush growing on the top of a high bank, and contained five eggs in an advanced state of incubation. I have been in the neighbourhood of Waltham Abbey every spring and summer for the last ten years, but I have never before seen a Lesser Redpoll or found its nest.

R. HAY FENTON.

#### NESTING DATES OF THE LESSER REDPOLL IN CAMBRIDGESHIRE, BEDFORDSHIRE AND WILTSHIRE.

SOME further dates of the nesting of the Lesser Redpoll (*Linota rufescens*) may be of interest:—

*Wicken Fens, Cambs.*—May 19th, 1901, one egg. June 2nd, 1901, three newly-hatched young and two eggs.

*Tempsford, Beds.*—June 21st, 1908, five eggs, apparently about half incubated. May 20th, 1909, three eggs, newly-laid. May 31st, 1909, two nests, one containing four eggs, apparently at least half incubated; the second, one egg and four newly-hatched young.

*Chippenhams Park, Cambs.*—June 21st, 1909, two nests, both with young about four days old.

GEORGE T. ATCHINSON.

REVERTING to Mr. Gray's remarks in the last number of BRITISH BIRDS on the breeding time of the Lesser Redpoll (*Linota rufescens*) in Essex, it may be of interest to him and

others to learn that so far as my experience goes of this bird in Wiltshire, the average date when eggs have been found is June 6th. These are my records for the past seven years:— June 2nd, June 5th, June 13th, June 5th, June 5th. I might mention that this is a very local breeding species in Wiltshire, and I am only aware of one locality where it may be found nesting. This particular place I should think contains about five or six pairs.

The fact that one of the nests, discovered on June 5th of this year, was patronised by a Cuckoo is, I think, worthy of notice, inasmuch as the Redpoll is so rarely selected as a foster-parent. The nest contained the Cuckoo's egg and four of the Lesser Redpoll.

D. W. MUSSEL-WHITE.

#### LATE NEST OF CROSSBILL IN IRELAND.

I WAS greatly surprised when I received a note from a keeper in co. Wicklow on June 8th, 1909, stating that he had "a Crossbill's nest" (*Loxia curvirostra*). On June 9th I climbed to the nest, which was about forty feet up a larch tree on the main stem, which had turned over at the top of the tree. The nest contained four eggs, three well incubated and one unfertile. I have never heard of so late a nest. I have many keepers on the watch for Crossbills, but had no report of any having been seen since October, 1908. The pair above referred to only arrived in the wood, in which they bred, about May 20th.

R. HAMILTON-HUNTER.

[The late John Hancock (*Cat. of Birds of Northumberland and Durham*, p. 49) mentions a nest with young at Hesleyside, on July 14th, 1838.—F. C. R. J.]

#### THE IRRUPTION OF CROSSBILLS.

WE have received the following further details of the irruption of Crossbills. In our next issue we hope to give a map showing occurrences so far as recorded.

YORKSHIRE.—On or about June 28th a flock of Crossbills alighted on a ship at sea off Scarborough, eight of them being caught. The vessel went into port on the Firth of Forth, where the birds were seen and identified by Mr. E. H. Steavenson, whose father told me of the fact (*H. E. Forrest*). One in adult plumage seen on the Yorkshire coast, September 12th, and another, also adult, on September 23rd (*H. F. Witherby*).

HERTS. AND BUCKS.—A flock of sixteen (both green and red birds) seen near Tring on the boundary between the two counties, on September 12th (*C. Oldham*).

SURREY.—A flock of a dozen visited Oxted on August 4th and stayed for a fortnight (*P. H. Bahr*).

STAFFORDSHIRE.—Mr. F. A. Monckton, of Stretton Hall, Stafford, writes that a flock of 20-30 appeared there on August 29th, and another small flock on September 2nd (*John R. B. Masefield*).

SHROPSHIRE.—On July 22nd a party of about 20 Crossbills paid a passing visit to Petton Park, near Shrewsbury. They appeared to be flitting about in a generally westerly direction. I received three from Cressage (two ♂—one ♀), shot on September 4th, out of a party of about forty. Two were killed near Oswestry about the same date (*H. E. Forrest*).

IRELAND.—Flocks of Crossbills have been reported from several places around Dublin. I saw a party of twenty in Palmerston Park, one of the city suburbs, on the 16th July (*W. J. Williams*). A solitary bird seen to settle on the only pine tree in the district, at Maam's Cross, co. Galway, on August 17th, and another heard calling in the same tree on August 20th (*P. H. Bahr*).

#### ALPINE SWIFT IN NORFOLK.

THE appearance of an Alpine Swift (*Cypselus melba*), during a recent stay at Cromer, may be worth recording. The bird could be seen any day flying up and down the cliffs up to the date of my departure, July 31st.

The differences between this bird and the Common Swift were very marked, the Alpine Swift having a more powerful flight, being larger in size, having white under-parts, and being generally browner in appearance.

D. W. MUSSEL-WHITE.

#### EARLY BREEDING OF NIGHTJAR IN IRELAND.

ON May 13th, 1909, a Nightjar (*Caprimulgus europæus*) was flushed from one egg, laid on a bare patch of ground amongst gorse, one hundred yards from the sea, in co. Waterford. The bird was again flushed from one egg on May 16th. The egg was then taken and handed to me on May 20th unblown.

R. HAMILTON-HUNTER.

### TWO YOUNG CUCKOOS FED BY THE SAME MEADOW-PIPIT.

ON Sunday, August 15th, while out on the moors north of Scarborough, I saw two perfectly fledged young Cuckoos being fed by one Meadow-Pipit. When first seen one of the Cuckoos was on a wall dividing a field from the moor, and the other was on the ground among the heather, and they were both keeping up a continual crying for food. Presently a Meadow-Pipit flew up to the one on the wall and put some food into its mouth. I kept my glasses on the Pipit while it went in search of more food among the heather and was surprised to see it go, not to the Cuckoo on the wall, but to the other one. This happened several times, the Cuckoos being fed alternately until one flew away into some trees, when the Meadow-Pipit devoted all its attention to the remaining one.

E. ARNOLD WALLIS.

### SHORT-EARED OWL BREEDING IN LANCASHIRE.

*Apropos* of your correspondent's note on the nesting of the Short-eared Owl in south Lancashire (p. 126), I may say that the species nests sparingly on Cockerham Moss, in north Lancashire, and also on the moors, and that a fair number of adults have unfortunately been shot both in and out of the nesting season in the locality during the past seven years.

H. W. ROBINSON.

### MONTAGU'S HARRIERS IN IRELAND.

AN adult male Montagu's Harrier (*Circus cineraceus*) was shot on the mountains near Rathdrum, co. Wicklow, on the 27th August. The stomach was empty, but Grouse feathers adhered to the bird's talons. Repeated captures of this species in co. Wicklow rather tend to the belief that it may yet be found breeding there. An immature male Montagu's Harrier was captured on Lambay Island, co. Dublin, on August 16th.

W. J. WILLIAMS.

### HONEY-BUZZARD IN IRELAND.

A FEMALE Honey-Buzzard (*Pernis apivorus*) in adult plumage was trapped on Lord Ashtown's property at Glенаheirey, co. Tipperary, on June 12th.

W. J. WILLIAMS.



## ADDITIONS TO THE SHROPSHIRE AVIFAUNA.

A CASE of Falcons has just been presented to the Shrewsbury Museum by Mrs. H. O. Wilson, who states that all the specimens in it were collected on or near the Longmynd, between 1848 and 1857, when her late husband was rector of Church Stretton. Besides examples of the commoner species, the series includes all three of the British Harriers, a pair of Kites, an adult Red-footed Falcon (*F. vespertinus*), Goshawk (*Astur palumbarius*), and an immature Iceland Falcon (*F. islandus*). This last had been recorded by Roche, and was one of two examples obtained at Leebotwood, the other being placed in the Hawkstone collection. The date was not given by Roche, but I now learn that in the Rev. H. O. Wilson's diary there is an entry on 5th April, 1853, of a payment to Millington (keeper) "for the Jer-Falcon"; so that the bird was probably obtained just before that date. The Red-footed Falcon has been obtained on three other occasions in Shropshire, but the Goshawk never; the species is, therefore, new to the county fauna.

H. E. FORREST.

## OSPREY IN SHROPSHIRE.

DURING the latter half of May an Osprey took up its quarters on Colemere, Ellesmere. It was seen there constantly by the keeper up to June 10th, when an otter-hunt, which lasted the greater part of the afternoon, disturbed it. That evening it was seen to capture a fish in Ellesmere mere, and it returned once afterwards to Colemere, but then disappeared.

H. E. FORREST.

## THE FOOD OF THE COMMON EIDER.

ON reading Mr. Robinson's note on this subject in the March number of BRITISH BIRDS (Vol. II., pp. 344, 384), I was reminded of a series of observations I made on the food of the Eider Duck a good many years ago. Perhaps the facts are of sufficient interest to be worth recording at this time.

In February, 1885, a bird-stuffer in Edinburgh received from a "sportsman," who was spending a holiday in Orkney, no fewer than forty-two Eiders. Happening to call at the taxidermist's the day the first lot arrived, I noticed that one of the birds was much swollen about the throat. On examination its gullet was found to be crammed with the shells of small molluscs, chiefly the delicate blue-rayed limpet

(*Helcion pellucidum*), and the pretty brown and white *Lacuna divaricata*, both common inhabitants of the fronds of the large sea-weed, *Laminaria*. These, and the contents of the stomach or gizzard, I secured, and made arrangements whereby I was enabled to examine the food-material from the whole of the birds. The following is a list of the mollusca and other animals identified. The paucity of bivalve molluscs is noteworthy in view of the prominent place usually assigned to them in the Eider's diet.

*Helcion pellucidum* :—Present, usually in large numbers, in 25 out of the 42 birds. Œsophagus often filled with it and the next species; in one case 286 of the former together with 144 of the latter—most of the shells still quite uninjured—were extracted. This was over and above the pounded mass in the gizzard.

*Lacuna divaricata* :—Present in 10 cases, thrice in large quantity, 144, as mentioned above, being taken from the gullet of one bird.

*Buccinum undatum* :—Occurred in 4 cases, in 3 of which it constituted practically the whole contents of the œsophagus and stomach, a few of the next shell being the only other thing present. One bird had 9 all but entire *Buccina* in its gullet; another had 8, and a third 7. A number of the shells were two inches in length.

*Trochus cinerarius* :—Occurred in 9 cases, but only in small numbers (3 or 4), and always entire or nearly so, even in the gizzard.

*Trochus magus* :—In two cases, four specimens and one respectively.

*Trochus zizyphinus* :—In two cases, one specimen in each.

*Littorina obtusata* :—Occurred only once, when a dozen examples were present.

*Purpura lapillus* :—Once; two found.

*Nassa incrassata* :—Once; a few only.

*Cypræa europæa* :—The "Cowrie" occurred but once; one specimen.

*Saxicava rugosa* :—Present once; portions of two examples.

*Solen siliqua* :—In gullet of one bird; portions about  $2\frac{1}{2}$  inches long of the valves (still united) of two examples. When entire these razor-fish shells must have been about 5 inches in length.

*Hyas coarctatus*, *Carcinus mænas*, and *Cancer pagurus* :—Remains of one or other of these three crabs were detected in 17 cases. *Hyas* was perhaps the most general, and *Cancer* decidedly the least frequent. Examples of *Hyas*, entire but for the want of a leg or two, from  $1\frac{1}{4}$  to  $1\frac{3}{8}$  inches, and a *Carcinus* 2 inches across the carapace, were taken from the gullets of some of the ducks.

*Idotea tricuspidata* :—Occurred in three cases, in one the œsophagus and gizzard being crammed with it.

*Asterias rubens* :—This star-fish was present thrice; in one instance 4 good sized examples were found in the duck's throat.

*Ophiothrix fragilis* :—Once; portions of 3 or 4 in gullet.

*Actinia mesembryanthemum* (?) :—A piece of a sea-anemone occurred once, along with fragments of crabs.

*Loligo* sp. (?) :—One duck had its gullet and stomach filled with the flesh of a cuttle-fish, probably of this genus.

Spawn of *Cottus* (?) :—Another contained a quantity of the roe of some inshore fish, *Cottus* perhaps.

Some small black stones were found in the gizzards of three of the birds, a few pieces of *Laminaria* in several, and in one

there was a grain of wheat. In one case only were both oesophagus and stomach quite empty.

From Eiders shot in the Firth of Forth I have obtained, besides *Helcion pellucidum* and *Lacuna divaricata*, many broken mussel shells (*Mytilus edulis*), and a few *Tellina tenuis*.

A variety of *Saxicava rugosa*, it is interesting to note, was found by Fabricius in the crop of the King-Eider (Jeffreys' *British Conchology*, Vol. III., p. 83).

WILLIAM EVANS.

#### FLOCKING OF THE RED-BREASTED MERGANSER.

ON August 2nd, 1908, I saw on a large inland lake in the north-west of Ireland some sixty Red-breasted Mergansers (*Mergus serrator*) collected together about the point of a promontory. On at least one other occasion within a few days of the above date I saw a pack of approximately the same number about the point of an adjacent island; they were probably the same birds. Again on August 3rd, 1909, I saw another pack in the same locality. On all these occasions the weather was *fine*. I was unable to discern their sex, for I am not sufficiently acquainted with the seasonal change of plumage in the male to enable me to differentiate between the sexes after he has assumed the "eclipse" plumage, which I gather from Messrs. Ussher and Warren's "Birds of Ireland" is some time in June. They, however, were probably males, with perhaps a few barren females. Seebohm in his work on "British Birds" (Vol. III., p. 630) states that "in stormy weather in summer the Merganser seeks shelter in some secluded creek or inlet. In these places numbers of birds congregate, but as soon as the storm is over disperse again."

HERBERT TREVELYAN.

#### WOODCOCK REMOVING ITS EGGS.

WITH reference to Miss Turner's photographs and account of the Water-Rail (pp. 65-68), an old keeper in Perthshire gave me a very graphic description last spring of how a Woodcock removed the eggs from a nest in which he had accidentally smashed one egg.

M. BEDFORD.

#### BLACK-TAILED GODWITS IN YORKSHIRE AND LINCOLNSHIRE.

EXCEPTIONAL numbers of the Black-tailed Godwits (*Limosa belgica*) occurred on the north and south shores of the Humber on September 3rd and 4th. One flock I saw

contained eleven birds. I handled in all five examples shot by the shore-gunners. These birds without an exception were immature and, singularly, all females. The occurrence of the species in such numbers is regarded as unusual, since, hitherto, it has visited the district only in small numbers and somewhat irregularly, not being recorded at all during some seasons.

STANLEY DUNCAN.

#### BLACK TERNS IN NORTH WALES AND CUMBERLAND.

IN view of the fact that the visits of the Black Tern to North Wales are few and far between (*cf. Vert. Fauna N. Wales*, p. 369), it may be worth recording that the species has this year appeared in three distinct localities, all about mid-May. Six were seen on 21st May flying about over Presaddfed Lake, near Holyhead, by Messrs. R. J. and W. G. Edwards. One in full summer plumage was shot while in company with several others at Towyn on 15th May, and sent in to Cooke, the Shrewsbury taxidermist, who also showed me a similar bird, shot at Bettws-y-Coed by a Mr. Cameron a few days earlier. This is a first record for Carnarvonshire.

H. E. FORREST.

ON August 26th I found the remains of an adult Black Tern (*Hydrochelidon nigra*), on the sandhills at Ravenglass, in Cumberland. The last seen there was one I recorded as having occurred on May 6th, 1907, which stayed a couple of days; the first there for many years (*see Additions*, Vol. II., p. 306).

H. W. ROBINSON.

#### WHITE-WINGED BLACK TERN IN WARWICKSHIRE.

KNOWING that the White-winged Black Tern (*Hydrochelidon leucoptera*) is an extremely rare visitor to the Midlands, it is with a certain amount of diffidence that I record a bird, I think undoubtedly belonging to this species, which appeared at Packington on May 8th, 1909. When I first saw the bird it was accompanied by a Black Tern (*H. nigra*), and I was at once struck by the lightness of its wings, as they hawked together over the pool. As I watched them the lighter-winged bird settled on a post rising above the water less than ten yards from where I stood, and I could plainly see that the carpal joint was pure white, this colour shading into the dark grey of the wing. After a short rest the bird raised its wings and a few seconds later flew from the stump, and during the

time that its back and tail were visible I could see that the tail, tail-coverts and lower rump were pure white.

As I am not aware that in any stage of its plumage the Black Tern has the tail, tail-coverts and carpal joints white, I think there can be no doubt that the bird was *H. leucoptera*.

A. G. LEIGH.

#### NOTES ON BREEDING OF THE COMMON AND SANDWICH TERNS.

HAVING marked, together with my friend Mr. F. W. Smalley, 742 young of the Common Tern, and handled nearly, if not quite, a thousand of them during July and August, perhaps a few notes on these young birds may be of interest.

The young of the Common Tern are dimorphic, in that some have red and others yellow legs, while some are much darker on the back than others. When hatched they have very thick legs, which grow thinner as the birds grow larger, until the extremely small tarsus of the adult is reached.

Some of the young in down have a pure white tip to the beak, of small extent, which disappears with the growth of the feathers. The chief food of these young birds consists of young herrings, but many small whiting were found, and also a few young codling, lumpsuckers and long rough dabs, and although the colony was bounded on one side by a river famous for its *Salmonidæ*, no trace of the young of these fish was found at all on the ground.

The chief food of the young Sandwich Terns was young whiting, and that of the Black-headed Gulls almost entirely sand-eels. I am indebted to Mr. Eagle Clarke, who kindly corroborated my identification of the fish disgorged by the young Terns.

Many of the nests of the Common Tern contained clutches of three eggs, and many also only a couple, and not a few a single egg only. These varied very much in colour, and several blue and white eggs were seen, and one complete clutch of three blue eggs spotted with small black spots at their larger end.

The Sandwich Terns arrive at their nesting place a month before the Common species, the first pair of the former being seen this year on March 29th, and of the latter on April 25th.

On our first visit on June 20th, the Common Terns had not finished laying, few nests containing more than two eggs and a great many only one, so no young were seen. But on this date the Sandwich Terns were nearly all hatched out, the

usual clutch being two, but some had three and a few only one egg. The keeper marks every egg of this species with an indelible pencil, so as to render them useless to egg-stealers, and their number this year was 498, as compared with a little over half that number last year. The young of this species are very hard to find, as the colony is situated among the thick herbage of the rag-wort, and we only succeeded in marking 42. On this date young Black-headed Gulls were running and flying about in thousands, being mobbed unmercifully and sometimes killed when they trespassed among the eggs of the Common Tern, and many eggs had yet to hatch. Upon one of our visits a Cuckoo also was having a very bad time of it. The mortality among the young Gulls is enormous, although the ground here is clean as compared with another gullery in Lancashire where the ground is very foul and wet, but the mortality far less, starvation and the gape-worm being the main causes of death among them.

The mortality among the young Common Terns is also fairly high, but not a fraction of what it is among the Gulls, but a remarkable fact is that there seems scarcely any mortality among the young of the Sandwich Tern.

A pair of Peregrines were preying upon the Common Terns, at whose advent or crossing every voice was hushed, although the Falcons were often invisible to the human eye; those birds on the ground rising, and those high in air falling towards the earth and scattering in all directions. On the other hand, the Gulls do not seem to mind a Hawk much, but rise in great consternation when a Heron passes overhead.

On our second visit on July 23rd, not a single Sandwich Tern or Gull remained, notwithstanding the number of eggs of the latter unhatched on June 20th, all of which were now also gone; but Common Terns were in great abundance, and in all stages of development, some were even flying. So easy were they to find that we rung 279 in two hours, and then had to stop owing to our supply of rings having become exhausted. Many eggs had yet to hatch, and some birds were still laying—possibly second broods.

On July 30th they were much scarcer and harder to find, but we succeeded in marking 297, but on August 10th, our next visit, we only marked 74, and less on every succeeding day, viz., on August 13th, 17th, 18th and 26th, when I marked 46, 30, 13 and 3, respectively, most of the old birds also having left on the last date.

There were a few cripples met with among the Common Terns, perhaps 20 or 25, the chief deformity being a stiff

wing from the middle joint outwards, but a few birds were afflicted with a curious disease which destroyed the feet.

H. W. ROBINSON.

#### GREAT CRESTED GREBE, DOUBLE-BROODED.

As there has been some controversy on the subject of the Great Crested Grebe (*Podiceps cristatus*) being double-brooded (cf. Vol. II., pp. 171, 242), I may here give the results of my observations on two pairs of this species at one of their Warwickshire breeding haunts. First, however, I would like to explain that by double-brooded I mean the laying of a second clutch of eggs after the first brood has been reared.

On May 9th I discovered a nest containing one egg; on May 12th it contained four eggs; and on May 30th one of these had been taken, while on the same date I saw the second pair, whose nest I had been unable to find, accompanied by two well-grown young; the eggs in the first nest hatched about June 12th. On June 24th I saw the female of the second pair sitting on a second nest; on July 17th one of these eggs had hatched, while I saw the male of the first pair carrying materials to a half-constructed nest on which sat the female; this latter nest unfortunately vanished, and a third was not constructed.

These observations show beyond doubt that the Great Crested Grebe will sometimes in any case rear two broods in one year.

A. G. LEIGH.

THE USE OF DOMED NESTS.—In the August number of the "Irish Naturalist" Mr. C. B. Moffat has an interesting paper (pp. 161-166) on the use of domed nests. Taking the eight Irish birds which build nests of this type, he proceeds to show that only one, the Magpie, can be said to need protection on account of the conspicuous colouring of the incubating female, and suggests as an alternative theory that the real object of the roof in six out of the eight cases, at any rate, is to prevent the young from falling out of the nest, especially at the period when they are nearly ready to fly. In confirmation of this he points out that the builders of the domed nests lay larger clutches than their congeners, which are content with the open type. Of course the same object is attained by those birds which breed in holes, or nest on the ground, and in the case of the Goldcrest by attaching the nest at several points to the branch above. The paper is an interesting

one and well worth reading. One or two apparent exceptions occur to us : the House-Sparrow builds a domed nest in the open or else breeds in a hole, yet the clutch is not a large one as a rule, and four is a much commoner number than five in some districts. The Brambling, which frequently lays seven eggs, the Great Grey Shrike, which has been known to lay as many as nine eggs, and the Red-backed Shrike, which often lays seven and occasionally eight, may be quoted as instances of birds which rear large families in open nests above the ground, while on the other hand the clutches in the genera *Cisticola*, *Prinia*, and *Scotocerca* are small, although the nests are roofed in. Mr. Moffat suggests that the Dipper's nest is covered as a protection from the spray, and possibly that of the House Martin served the same purpose when built on sea-cliffs.

F. C. R. J.

THE USE OF THE WINGS AND FEET BY DIVING BIRDS.— Under this heading Dr. C. W. Townsend contributes to the "Auk" (1909, pp. 234-248) a useful article bringing together the observations of a number of naturalists upon this point.



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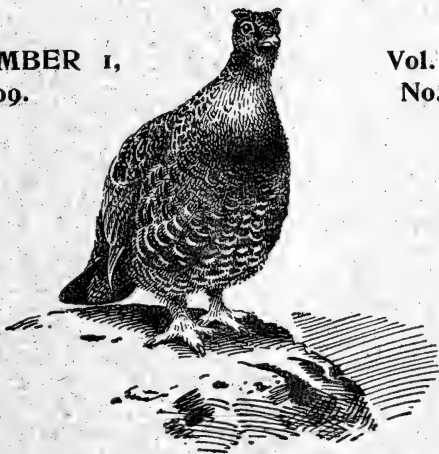
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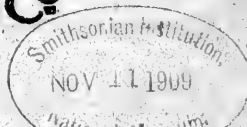
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[B.B., Vol. iii., Pl. XI.

*J. Southwold*

*Born June 15th, 1831. Died September 5th, 1909.*

# BRITISH BIRDS

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THOMAS SOUTHWELL.

(PLATE XI.)

ONE after another, zoologists, like all other mortals, drop out of the ranks, and enter into their rest. At this moment all who knew Thomas Southwell, of Norwich, are feeling the loss of a good friend. Born at King's Lynn, June 15th, 1831—one of ten children—he spent nearly his whole life in his native county, dying at his home in Norwich, September 5th, 1909.

A love of natural history developed in him very early, and as a boy all available time out of school was spent wandering about collecting eggs, etc.; he possessed also a great taste for practical mechanics. In 1846 he entered the Lynn branch of Gurney's (now Barclay's) Bank, where his father was at the time chief cashier. In 1851 he read his first paper before the "Lynn Conversazione and Society of Arts," choosing as his subject "Carbon." The following year he moved to the Fakenham branch of the bank.

In 1853 began a correspondence between Southwell and Professor Alfred Newton, which developed into a friendship,\* terminated only by the death of the latter fifty-four years later. In the same year he was made a Life Fellow of the Royal Botanical Society of Edinburgh, and shortly afterwards he left the bank and joined his brother Charles, then managing partner in Castell and Brown, a firm of wholesale confectioners in London. His health, however, gave way, and he returned to Lynn in 1866, and in the following year he re-entered Gurney's Bank at Norwich, and settled in that city.

In 1868 he was elected on the Committee of the Norwich Museum, and in the year following the Norfolk and Norwich Naturalists' Society was established. To the Transactions of that Society he contributed nearly one hundred papers, and, after having served as honorary

\* "A friendship of more than fifty years." In Mem., Professor A. Newton, by T. Southwell, Trans. Nor. and Nor. Nat. Soc. viii., 520 (1908); and in a letter to the present writer, dated June 15th (1907) he writes:—"I knew you would be shocked to hear of dear old Newton's death, he was such a splendid fellow and so good to everybody who was worth being good to; it is fifty-four years since I was introduced to him, and we have been friends ever since. My last letter from him was dated April 29th, sending me a copy of Mulso's Letters to Gilbert White. I was somewhat prepared for what followed, as he told me he was suffering from dropsy, and Miss Newton (his niece) kept me informed as to the course of his illness. J. H. Gurney and I went to the funeral, which was largely attended by College Dons and Naturalists. I shall miss him greatly. The obituary notice in "The Times" is the best I have seen and is quite approved by the family it brings out some of his marked peculiarities, such as contempt for unearned honours and all pretence and assumption, and his fervent love for his favourite science."



secretary for several years, was elected President of the Society in 1879, and again in 1893. In 1872 he was elected a F.Z.S., and in 1881 M.B.O.U. He was one of the founders of the Museums' Association.

He retired from the bank in 1896, just fifty years from the time he entered the Lynn branch.

While at Lynn and Fakenham, in spite of long bank hours, he pursued his study of natural history, often getting up in the morning as early as five to take long walks for observing bird-life before the bank opened; and made a large collection of birds' skins and skeletons and of eggs. He seems to have given up shooting from about the time he went to Norwich. He was always fond of making skeletons and dissections, excelling in anything that required neatness and delicacy of touch. The confinement of the bank was very irksome and uncongenial to him.

Southwell was a fairly prolific writer, but never wrote for writing's sake, but always because "out of a full heart the mouth speaketh." He was a most interesting companion, being stored with zoological knowledge, and besides his numerous published writings, has left some large MS. volumes filled in his methodical and careful manner with facts which cannot fail to be of interest and value, if, as is sincerely to be hoped, they are some day extracted and published by a competent editor.\*

His published writings include a second edition of Lubbock's "Fauna of Norfolk," originally published in 1845, containing much original matter (Norwich, 1879); "The Seals and Whales of the British Seas" (London, 1881), an excellent handbook of those somewhat neglected orders, and although our knowledge of them has increased very considerably (thanks largely to Southwell himself) in the twenty-eight years since it was published, it remains the only work of its kind and is still very useful;

\* With respect to his cetacean notes he remarked in a letter to the present writer, dated September 22nd, 1903:—"The subject is such a large one, and I have such a mass of original information in the shape of letters, logs, etc., that I hardly know how to select."

but, as he told the present writer a few years ago, sufficient copies had not been sold to pay for the paper on which it was printed. It was originally published in the form of a series of papers in "Science Gossip." In 1890 he completed the third volume of Stevenson's "Birds of Norfolk," effecting the "splice" on to another man's work in a manner which gained general approval.\* In 1902 he published "Letters and Notes on the Natural History of Norfolk," from the MSS. of Sir Thomas Browne (1605-1682). The guide to the Zoological collection in the Norwich Castle Museum (with which he was so intimately connected) is a much appreciated piece of work by him.

In addition to these separate publications, he was the author of no less than one hundred and twenty communications to the "Zoologist" between 1869, when he sent a note on nests of Dabchick, and 1909, when he contributed the last of his series of twenty-eight annual reports on the Arctic Whale Fishery; a series begun in 1882 in the pages of the Proceedings of the Natural History Society of Glasgow, on the previous season's voyage, and continued since in the "Zoologist" (the reports for two seasons appearing in the volume for 1884). This series forms probably the most lastingly valuable result of his industry.

His long tale of papers in the "Transactions of the Norfolk and Norwich Naturalists' Society," already referred to, ends in the volume for 1908, with a paper "In Memoriam" of his two friends Alfred Newton and Howard Saunders, and now it is the turn of someone else to attempt the same pious office towards himself. He was also an occasional contributor to the natural history columns of the "Field," and there are a few papers by him scattered through various other periodicals. Of these last, as they are almost hopeless to find without a

\* "Mr. Southwell makes unnecessary apologies in his preface for undertaking the task, which he seems to have performed in a very satisfactory manner." "Ibis," 1891, p. 288.

clue, the following few may be noted, besides the paper of 1882 above mentioned :—

“The Reproduction of the Eel,” and “Sperm Whale stranded at Grimsby in 1563 ” (with J. Hopkin), the “Naturalist,” 1885.

“On the Occurrence of Sowerby’s Whale on the Yorkshire Coast ” (with W. Eagle Clarke), “Ann. and Mag. of Nat. Hist.,” 1886.

A paper on Swans in “Blackwood’s Magazine ” (December), 1888.

“On a Specimen of Sowerby’s Whale on the Norfolk Coast ” (with S. F. Harmer, M.A., F.R.S., now Keeper Zool. Dept., Brit. Mus.), “Ann. and Mag. of Nat. Hist.,” 1893.

“The Birds of Norfolk ” in the “Victoria History ” of the County, 1901.

“Whale Fishing Ancient and Modern,” St. John’s, Newfoundland “Evening Herald ” (August), 1903.

“On the Whale Fishing from Scotland,” “Ann. of Scottish Nat. Hist.,” 1904.

“Some Results of the North Atlantic Fin-Whale Fishery,” “Ann. and Mag. of Nat. Hist.,” 1905.

“Newfoundland Fin-Whale Fishing in 1905,” “Ann. of Scottish Nat. Hist.,” 1906.

“Notes on an Eighteenth Century Museum at Great Yarmouth,” “The Museum’s Journal,” 1908.

A complete list of his papers would be foreign to the purpose of this short memoir, but some of those on zoological archæology may be noted: In the “Trans. N. and N. Soc.”:—“On the Ornithological Archæology of Norfolk,” 1871; “Norfolk Decoys,” 1878; “The Fens and Fen-Folk,” 1884; “On some Ancient Customs and Regulations with regard to the Fresh-Water Fisheries of the County of Norfolk,” 1887 and 1888; “Falconry in Norfolk,” 1891; “St. Helen’s Swan-pit,” 1892, begins with bygone days; “Shooting at Holkham,” 1893, begins in the latter part of the eighteenth century; “Feltwell Decoy,” 1898, and in the same year “Exhibition

of a Norfolk Bustard" and a second paper on "St. Helen's Swan-pit" are all more or less archæological; "Wild-Fowl Driving in the sixteenth Century," 1900; "On the Breeding of the Crane in East Anglia," and "On Dr. Marsham's 'Indications of Spring,'" 1901; "Ancient Records of the Occurrence of certain Cetaceans on the Norfolk Coast," and "The Great Bustard in Norfolk," and "On an unpublished Letter from Dr. Thomas Browne to Mr. William Dugdale," 1902; "Leaves from an Old Diary in the Years 1800-2," 1903; "On some Early Dutch and English Decoys," 1904; "Some Old-Time Norfolk Botanists," 1907.

Similarly, in the "Zoologist":—"Martens in Suffolk," 1877; "Fen *versus* Marsh," and "An Unrecorded Norfolk Great Bustard," 1897.

The principal ornithological rarities in Norfolk recorded by him are (in the "Zoologist") :—Glossy Ibis, Sooty Shearwater, Pallas's Sand-Grouse, King-Eider, Caspian Plover, Little Bustard, Broad-billed Sandpiper, Siberian Pectoral Sandpiper, Pallas's Willow-Warbler, Mediterranean Herring-Gull and Hybrid Blackgame. In addition he chronicled numerous rare occurrences in other classes.

Notwithstanding the deep interest he took in the blood-thirsty occupations of sealing and whaling, he was one of the gentlest and kindest of men, hating any kind of cruelty, and doing all he could to promote preservation and check slaughter. He put whole-hearted service into the affairs of the Norwich Castle Museum, and was always on the look-out for specimens, photographs, or anything else that would enrich the collection, and that most excellent museum owes him a very great deal.

His wife predeceased him in 1903, and he leaves two daughters.

With these imperfect lines we must leave him, fully conscious of what scant justice we have done to the memory of our revered old friend. There is one drawback to having known him, namely, that his loss leaves a permanent void—unfillable!

ALFRED HENEAGE COCKS.

## MARKING BIRDS.

## PROGRESS OF THE " BRITISH BIRDS " SCHEME.

NOTWITHSTANDING the late date at which we started the BRITISH BIRDS scheme for marking birds (*see antea*, pp. 4-6), so many of our correspondents have come forward to help that we think it must be conceded that an excellent beginning has been made.

We have issued 4750 rings, and of these nearly 2200 have been used to date. The proportion of rings used to those issued is rather disappointing, but this is to be accounted for chiefly through the nestlings flying before the rings reached our helpers. Taking this fact into consideration, we think the total ringed is satisfactory and sufficient to lead us to expect some results, but next year we trust that very much more will be done. We shall be prepared with rings in good time, and we anticipate that many more readers of the Magazine will volunteer to help. We also hope that those who have the opportunity of catching birds throughout the winter will not neglect to ring them.

A few of our helpers have not yet sent in their schedules, but the following is a list of those who have, with the number of birds ringed by each. Thanks are due to all those who have helped, and particularly to Messrs. H. W. Robinson and F. Smalley, who have worked very hard and have ringed nearly half the total number :—

Messrs. H. W. Robinson and F. Smalley (1002), Dr. C. B. Ticehurst (200), Messrs. J. Bartholomew (95), J. R. B. Masefield (94), Bentley Beetham (89), R. O. Blyth (73), T. Hepburn (47), C. H. McCall (44), Dr. N. F. Ticehurst (40), Messrs. H. B. Booth (40), A. Bankes (34), W. E. Suggitt (32), H. S. Gladstone (28), J. S. T. Walton (24), W. C. Wright (23), A. Geoffrey Leigh (22), C. Oldham (20), A. H. Duncalfe (18), Miss F. Russell (18), Mr. E. G. B. Meade-Waldo (16), Commander H. Lynes (15), Lord William Percy (14), Mr. E. P. Chance (14), Miss E. L. Turner (14), Messrs. J. L. Bonhote (13), H. E. Forrest (13), J. H. Gurney (13), C. K. Siddall (13), H. F. Witherby (13), Stuart Maples (12), Major H. Trevelyan (12), Messrs. F. W. Headley (11), T. P. Greenwood (10), M. Harris (9),

H. R. Leach (9), Col. R. H. Rattray (9), Mrs. Patteson (7), Miss Annie Jackson (6), Messrs. C. W. Colthrup (5), H. H. Machell Cox (4), H. W. Finlinson (4), Stanley Duncan (3), P. F. Bunyard (1), H. L. Popham (1), C. L. Colleneth (1).

The following is a list of the various species and the numbers of each which have been marked. The number of different species (viz., 77) which have been ringed is remarkable :—

Thrush, Mistle .. .. .	2	Woodpecker, Great Spotted	2
Thrush, Song .. .. .	71	Cuckoo .. .. .	4
Blackbird .. .. .	83	Hobby .. .. .	1
Wheatear .. .. .	1	Merlin .. .. .	1
Whinchat .. .. .	7	Kestrel .. .. .	1
Redstart .. .. .	1	Heron .. .. .	14
Redbreast .. .. .	41	Sheld-duck, Common ..	1
Whitethroat .. .. .	22	Duck, Wild .. .. .	11
Whitethroat, Lesser ..	1	Teal .. .. .	1
Warbler, Garden .. .. .	3	Eider, Common .. .. .	3
Chiffchaff .. .. .	2	Merganser, Red-breasted ..	1
Wren, Willow .. .. .	50	Pigeon, Wood .. .. .	3
Warbler, Sedge .. .. .	1	Dove, Stock .. .. .	1
Sparrow, Hedge .. .. .	18	Dove, Turtle .. .. .	1
Dipper .. .. .	4	Grouse, Black .. .. .	2
Tit, Great .. .. .	16	Grouse, Red .. .. .	7
Tit, Blue .. .. .	12	Pheasant .. .. .	7
Wren .. .. .	9	Partridge .. .. .	1
Wagtail, Pied .. .. .	12	Rail, Land .. .. .	3
Wagtail, Grey .. .. .	5	Coot .. .. .	1
Wagtail, Yellow .. .. .	1	Curlew, Stone .. .. .	1
Pipit, Tree .. .. .	14	Lapwing .. .. .	56
Pipit, Meadow .. .. .	27	Oyster-Catcher .. .. .	7
Shrike, Red-backed .. ..	2	Woodcock .. .. .	6
Flycatcher, Spotted .. ..	23	Snipe, Common .. .. .	1
Swallow .. .. .	113	Dunlin .. .. .	5
Martin, House .. .. .	13	Sandpiper, Common .. ..	5
Greenfinch .. .. .	28	Redshank .. .. .	5
Sparrow, House .. .. .	8	Curlew .. .. .	14
Sparrow, Tree .. .. .	17	Tern, Sandwich .. .. .	57
Chaffinch .. .. .	6	Tern, Common .. .. .	786
Linnet .. .. .	20	Tern, Arctic .. .. .	25
Bunting, Yellow .. .. .	4	Gull, Black-headed .. ..	417
Bunting, Reed .. .. .	2	Gull, Herring .. .. .	5
Starling .. .. .	21	Gull, Lesser Black-backed	12
Jackdaw .. .. .	11	Gull, Great Black-backed ..	1
Lark, Sky .. .. .	1	Kittiwake .. .. .	4
Nightjar .. .. .	3	Puffin .. .. .	4
Wryneck .. .. .	14	Petrel, Storm .. .. .	1

Turning now to results, that is to say, to the recovery of marked birds, it is as yet too early perhaps to expect many results of interest. The most interesting recovery

MARKED BIRDS RECOVERED.

Name of Bird.	Age when Marked.	Ring No.	Ringer's Name.	Place Ringed.	Date Ringed.	Date Recovered.	Place Recovered.	Reported by.	Remarks.
Blackbird ( <i>Turdus merula</i> )	Young	2047	R. O. Blyth	Stelmorlie, Ayrshire	18 vii. '09	27 vii. '09	Stelmorlie	Ringer	Killed against window
Do.	Nestling	2255	J. Bartholomew	Glenorchard, near Glasgow	17 vi. '09	1 viii. '09	Glenorchard	Do.	Caught in fruit net
Do.	Do.	2297	Do.	Do.	22 vi. '09	1 viii. '09	Do.	Do.	Do.
Do.	Young, fledged	671	H. F. Witherby	Burley, Hants	13 vi. '09	31 vii. '09	Burley, Hants	Do.	Do.
Do.	Nestling	351	C. H. McCall	Southwold, Suffolk	17 vi. '09	7 viii. '09	Reydon-on-Southwold	A. T. Moore	Shot
Meadow-Pipit ( <i>Anthus pratensis</i> )	Young	1013	H. B. Booth	Ben Rhydding, Yorks	19 vi. '09	9 vii. '09	Near Ben Rhydding	Ringer	Killed against wire
Curlew ( <i>Numenius arquatus</i> )	2 weeks	3570	A. H. M. Cox	Dartmoor	20 vi. '09	10 vii. '09	Dartmoor	Ringer	Apparently killed by Fox
Black-headed Gull ( <i>Larus ridibundus</i> )	Nestling	3667	T. Hepburn	Fingrinhoe, Essex	5 vii. '09	19 vii. '09	Fingrinhoe	Ringer	Dead in nest
Do.	Fully feathered	3026	{ H. W. Robinson } { F. Smalley }	Ravenglass, Cumberland	20 vi. '09	18 ix. '09	Near Middlesbrough, Yorks	W. Belland	Shot
Do.	Nestling	3184	C. B. Ticehurst	Near Bala, Merioneth	12 vi. '09	6 ix. '09	Frocester, Glos.	F. Wilson	Shot
Common Tern ( <i>Sterna fuscata</i> )	Nestling	2704	T. Hepburn	Fingrinhoe, Essex	4 vii. '09	11 vii. '09	Fingrinhoe	Ringer	Found dead
Do.	Nestlings	14 birds	{ H. W. Robinson } { F. Smalley }	Ravenglass, Cumberland	22 vii. to 13 viii. '09	11 to 17 ix. '09	Near Ulverston, Cumberland	H. B. Jurney	Caught in flight nets and released
Sandwich Tern ( <i>Sterna cantiaea</i> )	Nestling	2459	Do.	Do.	30 vi. '09	20 viii. '09	Near Silloth, Cumberland	A. W. Runney	Recovered 30-40 miles north of breeding place

that has as yet been reported is ring No. 4308, which we hear through the Foreign Office has been taken to the British Vice-Consul at Corcubion, in the north-west corner of Spain. This ring was placed upon a young Common Tern in Cumberland on July 30th by Messrs. Robinson and Smalley, and we hope to give fuller details regarding the date, place and circumstances of its recovery in a future number. The foregoing table shows the recoveries which have been reported to date and about which we have full details.

H. F. W.



# NOTES

## THE MEANING OF BIRDS' SONGS.

IF I read him correctly, Mr. F. Stubbs (*antea*, p. 155) seems to think that song is nothing more than the ebullition of superfluous energy. That is to say that it plays as much or as little part in the life of a bird as the steam escaping into the air from the safety-valve of an overcharged boiler plays in regard to the economy of an engine. Mr. Kirkman boldly says, that a Robin "sings to please himself" But do we in Nature see things running to waste in this spendthrift way?

When Mr. Stubbs says in regard to singing that the bird has "no alternative," I suppose no one will disagree with him, for song is surely an "unconscious," almost a reflex act, initiated by a series of internal physiological changes and external conditions in the environment of the bird. Of course, if we choose to think that any vitality can be superfluous, I suppose we may say, with Mr. Stubbs, that song *is* the result of superfluous vitality. But then we can just as easily say the same of reproduction, which does not seem to get us much further.

What we should like to know is, what is this "vitality," and in what mysterious way is it induced to act in certain directions at certain cyclical periods. Mere abundance of food does not seem a sufficient explanation, otherwise we should have expected the song of the Blackcap to have waxed stronger in the spring, which was not the case.

Has anyone ever compared the syrinx of a bird during the reproductive period with that of a syrinx in the non-breeding or nestling stage? We know that at certain periodic seasons the reproductive organs take on an increased physiological and histological activity and are thus ready to perform their functions if the opportunity arises. We know also that in the case of the higher vertebrates, distant organs and tissues of the body become physiologically active in sympathy with and synchronously with the physiological activity of the reproductive organs, and it is not difficult to imagine that in birds the syrinx may behave in the same sympathetic way, becoming more adapted at this period for the utterance of finer notes, this sympathetic action being really due to an internal secretion which perhaps has, at the same time, a selective action on other tissues. Supposing this were so song would become a purely sexual phenomenon.

I gather, however, that Mr. Stubbs uses the word "sexual" in a more restricted sense than is usual. For instance, I imagine that the autumnal or winter moult of a bird, in so far as it is different in the two sexes, is purely sexual, yet this change is not productive of any emotional feeling such as Mr. Stubbs seems to think would be necessary in the case of the Sparrow (when he utters his autumnal song) if it were argued that song is always sexual.

In my original letter I should like to state that I only ventured to suggest a cause for *winter* song, or song uttered apart from the actual breeding season, and I appreciate the difficulty there would be in applying the above explanations to song at this period.

PERCY R. LOWE.

I SHALL be obliged if you will permit me to point out that in his letter (p. 155), Mr. F. J. Stubbs has entirely misinterpreted my remarks on the above subject (p. 121) by making it appear I formulated the view that the bird "sings to please himself" as an "alternative" to the one which makes its song an expression of sexual emotion. I made no such statement. I contented myself with pointing out that "there is evidence to show that birds sing to give expression to other emotions than those of love," a statement that most ornithologists would, I imagine, be prepared to endorse. By way of proof I instanced the fact that the Robin sings in winter. It was in connection with this species alone that I used the expression, "He sings to please himself." By it I meant to suggest that the Robin sings in winter, like the Starling, the House-Sparrow, the Skylark, and others, for the same reason that a man whistles as he goes cheerfully, and with a full stomach, to his work, and that a baby croons upon the carpet. It may or it may not be the right explanation, but in attacking it Mr. Stubbs seems to have been inadvertently attacking me on the one point in which I may be said to agree with him. I admit that, owing to the vagueness of the expression, "Sings to please himself," he had an excuse which he had not when he made it appear I assumed that what applied to the Robin in winter applied to all birds, and to the Robin itself in spring.

Mr. F. J. Stubbs holds that song is always the "ebullition of superfluous energy." I have just been re-reading Lloyd Morgan's excellent "Habit and Instinct." In it I find (p. 228): "Song-birds matched against each other have been known to sing till they dropped exhausted to death." It seems to me that a bird singing in a state of complete

exhaustion cannot correctly be said to be giving expression to its superfluous energy. And the same applies to birds that sing between the rounds of a protracted fight.

But there is not much use in discussing Mr. F. J. Stubbs' view until we are a little clearer as to what it means. After the phrase above quoted, he adds, "and has no *direct* connection with sexual matters." At the end of his letter he repeats that "bird-song is not connected except indirectly with sexual affairs, and that it is at all times and in all birds *nothing but* (italics mine) the overflowing of the vitality that cannot be stored or used up in any other way." What is the nature of the indirect connection with sexual affairs, if song is "nothing but" the expression of superfluous vitality?

F. B. KIRKMAN.

#### MARSH-WARBLER BREEDING IN KENT AND WORCESTERSHIRE.

I HAVE recently had brought in to me for identification a nest and five eggs which undoubtedly belong to *A. palustris*. They were taken by an entomologist and sent to my friend as a peculiar clutch of Reed-Warbler's eggs. They are typical and rather larger than those from the Continent; the nest is very much like the one described by me in Vol. II., p. 183, of this magazine, except that it is rather deeper on the inside. It was found on an old rubbish-heap, overgrown with nettles and cow-parsnip, on June 22nd, near Birchington. The four supports round which the nest is built consist of nettle and corn, one of the nettle and two of corn are apparently of last year's growth. The eggs were quite fresh.

It may interest Mr. W. Davies (*cf.* p. 157) to know that I have in my collection a clutch of four eggs of the Marsh-Warbler with a Cuckoo's egg, taken in Worcestershire on June 25th, 1904. They were sent to my correspondent as the nest and eggs of a Reed-Warbler. The nest was typical, but the eggs are unusual, though they have the characteristic peppered specks which are one of the principal distinguishing features in the eggs of *A. palustris*. I believe this to be, with one exception, the only British record of the Cuckoo having used the nest of the Marsh-Warbler. Mr. Warde-Fowler records the 'one other in the "Zoologist" (Vol. X., p. 403).

PERCY F. BUNYARD.

#### DARTFORD WARBLER FEIGNING INJURY AT THE NEST.

DURING the summer of 1908 I paid repeated visits to a small colony of Dartford Warblers (*Sylvia undata*), and on one

occasion witnessed a male bird perform an action which I think has not previously come under the notice of ornithologists, or at least does not appear to have been placed on record.

I had discovered a nest placed low down in a thick furze-bush growing beside a sandy cart-track and containing nearly fully-fledged young, which at my approach scrambled out into the tangled heather and were quickly lost to view. Being desirous of observing the actions of the adult birds on their return I partially concealed myself close to the nest, and awaited developments. The male was the first to appear, and immediately on discovering my presence it began to "scold," and when I did not move away, his excitement became more intense, and alighting on the sandy track about two yards from me, he dragged himself along on the ground, with drooping wings and tail-feathers widely expanded. This curious and extremely interesting performance was repeated four times, but, failing to produce the desired effect of enticing me from the whereabouts of the brood, was then abandoned.

HOWARD BENTHAM.

#### NOTES ON THE BREEDING OF THE GREAT TIT.

At the end of April this year a pair of Great Tits (*Parus major*) took possession of a box in an apple-tree in my garden in Chester and commenced to build. The nest was finished on May 4th, six days having been spent in building. On May 5th the first egg was laid, and on May 12th the female bird commenced to sit on a clutch of seven. She sat extremely closely, and often refused to move from the nest when I opened the box, which I did daily in the hope of finding the male bird sitting. In the daytime during incubation, he visited the box seldom, but always roosted in it at night.

Seven young were hatched out on May 24th, incubation having lasted twelve days.

In appearance they were excessively ugly, being naked with the exception of a little down on the skull and shoulders. The legs and claws looked much too strong for the rest of the body. Except for increased size little change was observable on the third day. On the fourth day there was down on the dorsal tract and signs on the wing of the coming pin-feathers. On the sixth day the bluish colour was noticeable. The tail-feathers could not be seen until the tenth day. On the eleventh day the nestlings had their eyes open. On the fifteenth day a curious incident occurred, the female laid an egg on the young birds! When twenty-one days old the birds were fully feathered, and two days later they left the nest.

On leaving the box the parents usually carried the fæces of the young out and dropped them a short distance away from the box. I never saw anything to lead me to suppose that they were swallowed.

The food carried in to the nestlings consisted almost exclusively of small moth *larvæ*. About thirty yards from the nest there was a small spindle-tree, which was at this time literally covered by the *larvæ* of the Small Ermine Moth (*Iponomeuta padella*). For the first sixteen days the Great Tits made no attempt to take these caterpillars. Probably they were afraid of the web-like material which surrounds the *larvæ* of this species. On the seventeenth day I saw the male bird with a grub I did not recognise, and when he tried to enter the box I frightened him with the shutter of a camera I had fixed near the nest, and he dropped a caterpillar, which I found to be that of the Ermine Moth.

Having found they could take them with impunity the Great Tits made short work of these garden-pests; for until the young left the nest the birds were constantly backwards and forwards between the spindle-bush and the box. I counted their visits on several occasions and found them paying often four in five minutes!

The female bird would frequently arrive with food before the male left the box and *vice versa*.

I recognised the *larvæ* of the following insects being taken as food:—

Small Ermine Moth	( <i>Iponomeuta padella</i> )
Winter Moth	( <i>Cheimatobia brumata</i> )
Magpie Moth	( <i>Abraxas grossulariata</i> )
Cabbage Moth	( <i>Mamestra brassicæ</i> )
Sawfly sp.	( <i>Nematus ribesii</i> )

There were three nests of Humble Bees (*Bombus* sp.) close at hand, but I did not see the Great Tits attempt to take the bees.

I have no doubt that the birds will take any small *larvæ* as food, and the above mentioned species happened to be the commonest available near this nest.

The Great Tits undoubtedly do much more good than harm in an orchard—the foregoing short list is composed entirely of injurious insects, and the Small Ermine Moth in particular is a most destructive species.

C. KINGSLEY SIDDALL.

## WOODCHAT SHRIKE DEVOURING SWALLOW ON MIGRATION.

REFERRING to Commander H. Lynes' remarks in his interesting paper on "Migration of Birds," regarding Shrikes not molesting small birds when migrating with them (see p. 75),

the following from my notes for the year 1904 may be of interest.

In the latter half of April, whilst on the voyage home from India per P. & O. s.s. "Egypt," and when in Lat.  $34^{\circ} 10'$ , Long.  $23^{\circ}$ , *i.e.*, about seventy miles south-west of Gozo, off Crete, a number of small *Passeres* came on board. Among these were several Swallows (*Hirundo rustica*), and three or four Woodchat Shrikes (*Lanius auriculatus*). One of the latter alighted in front of me, on a davit-chain on the boat-deck, in close proximity to an exhausted Swallow resting on the same perch. After eyeing the Swallow for a moment or two, the Shrike sidled up to it, and suddenly pouncing on it the two fluttered together to the deck. Here the Shrike quickly despatched its victim by hammering in its skull, and then proceeded to break it up and voraciously devour it. The other Shrikes now appeared on the scene, evidently intent on a share of the repast, but were driven off by the one in possession.

Although, besides the Swallows, a few other tired little migrants sat perched about the decks and in the rigging, such as Willow-Warblers (*Phylloscopus trochilus*) and Wagtails (*Motacilla flava*), I saw none of the other Shrikes follow the example of the first and kill. They did not appear to have the pluck and determination to take what was waiting for them. Possibly exhaustion had told on them, and the requisite vigour was not forthcoming.

The wind, which was at the time S.E. or a following one, was favourable to the stay of the migrants on board, but by sunset it had backed to a stiff "Nor.-Wester" and all of them were blown off astern. We were then some two hundred miles from the nearest land, and I think it likely that the only one of our visitors that succeeded in reaching European shores was the Shrike, that seized the opportunity to fortify the "inner bird," as described.

H. A. F. MAGRATH.

#### NOTES ON THE BREEDING OF THE SISKIN IN NORTH WICKLOW.

SINCE 1904 the Siskin (*Carduelis spinus*) has been a favourite of mine; its joyousness during the breeding season, tameness, quaint ways, and local distribution, make it a most fascinating study. I have examined a large number of nests in North Wicklow, Ireland, and have seen very few in April, the first clutch usually being laid in May, and the second in June or July. I append a list of nests inspected by me in July, 1908, and from April 1st to June 6th, 1909. Only two of these nests could have contained eggs in April, and the first nest I found

in 1908 was on May 14th. This year I made an exhaustive search in April in the district where the Siskin is most common in Wicklow, and the first nest I found to contain a full clutch was on May 2nd, and no broods were fledged until the end of the month.

DETAILS OF SISKINS' NESTS IN NORTH WICKLOW.

- 4.7.08. 5 eggs; incubation begun.  
 25.7.08. 4 eggs fresh; 4 eggs; incubation begun; 4 eggs hard set; 5 eggs chipping.  
 2.5.09. 4 eggs fresh.  
 8.5.09. Nest building.  
 9.5.09. 4, 3, 2, 3, eggs fresh; 3 eggs hard set.  
 15.5.09. 3, 5, eggs fresh; 4 young, week old.  
 16.5.09. 5 young, about 4 days old.  
 22.5.09. 5, 4, eggs fresh; 4 young, about 3 days old.  
 30.5.09. 4 eggs fresh.  
 3.6.09. 5 eggs fresh.  
 5.6.09. 5, 5, 4, eggs fresh; 2 young (and 1 addled egg).  
 6.6.09. 5 eggs fresh; 4 young.

POSITIONS OF NESTS.

In Larch (3), Scotch Fir (6), Spruce (15), Ornamental Fir (3). Height from ground varied from 10 to 50 feet; 7 were at 50, 9 at 40, 2 at 35, 2 at 30, 3 at 25, 2 at 20, 2 at 15, and 1 at 10 feet.

The North Wicklow eggs are of two types—the common one being clear, pale blue, with pale red spots and streaks, and deep red-brown outer spots. The uncommon type is very pale blue, looking cream-colour until blown, and is spotted with pale red with practically no deeper marks.

On a few occasions I have found an almost fully fledged young bird dead in the nest; probably when the brood left these birds were unable to follow and were forsaken by the parents.

On May 23rd, 1908, I took a nest containing four eggs from a larch-tree only ten feet from the ground. On June 27th a nest containing three eggs of a similar (an uncommon) type was in exactly the same spot.

On April 23rd, 1909, I was watching a pair of Siskins building, when a male Chaffinch flew down to the nest and commenced pulling out the inside; the Siskins, although flying about in great excitement, made no effort to drive the intruder off. The nest contained four eggs, however, on May 2nd.

On May 5th, 1909, I watched a pair of Siskins building in a larch-tree, the nest was quite low down—about fifteen feet. On May 15th I was astonished to flush a Chaffinch from the nest, which contained four eggs of this species. The Chaffinch had completed a nest on the partially made one of the Siskin.

Clutches of three and four I found common, five the exception. I have never seen six. R. HAMILTON-HUNTER.

## THE IRRUPTION OF CROSSBILLS.\*

FÆROE ISLANDS.—“I obtained two Crossbills out of a flock of eight at Midvaag, Vaago, Færoe Islands, on July 2nd, 1909. I believe them to be the first examples of the Crossbill recorded from the Færoe Islands” (*Rev. Francis Turreff*).

SCOTLAND.—*Fair Isle*.—First seen June 23rd; “numbers afterwards increased, as if the birds had come to the island in a series of waves, and as many as 300 were seen some days.” They remained during July, but decreased in numbers towards the end of the month. Small parties were seen throughout August. *Shetlands*.—An adult male on June 27th in Unst; at Lerwick, the first on June 28th and from then until August 13th (generally small parties); also reported to Mr. J. S. Tulloch from Yell, North Mavine, Whalsay, Bressay, Tingwall; many near Sumburgh Head (one flock of 40); a number were taken on fishing-boats eastwards of the Shetlands [*cf.* also *antea* p. 83]. *Orkney*.—Many near Kirkwall and small flock on Sanday (no dates) [*cf.* also *antea*, p. 82]; one came on board a steamer 95 miles E. by S.  $\frac{3}{4}$  S. of Auskerry Light on July 12th. *Sule Skerry*.—One taken at lighthouse lantern on June 28th and more seen afterwards, 42 being the largest number; they stayed on this almost desert island about three weeks. *Outer Hebrides*.—Flocks of 10, 20, and 30 at Barra since the end of June; a small party (some old males) near the Butt of Lewis on June 28th; a great many appeared on the Flannan Islands at the end of June and stayed about five weeks; two were seen in North Uist (*W. Eagle Clarke, Ann. Scot. Nat. Hist.*, 1909, pp. 215–217). [No information with regard to occurrences on the mainland of Scotland additional to that which we have already published is given, which seems extraordinary.—H. F. W.]

NORTHUMBERLAND.—Mr. Abel Chapman writes that Mr. Robert S. Watson informs him that Crossbills were seen at Sidwood, near Bellingham, North Tyne, for the first time since September, 1903, in the last week of July, 1909, when a flock of 15–20 appeared.

\* For previous records see pp. 82, 123 and 162. Commander H. Lynes has very kindly promised to prepare maps showing the extent and if possible the progress of the irruption in the British Isles, but, as much fresh information is published in this number he has not been able to complete the maps in time, and it is proposed to publish them in the next issue.—H. F. W.



**YORKSHIRE.**—A large flock first seen at Swainby in the middle of July, afterwards they broke up into small parties (*T. H. Nelson*). An adult was picked up under telegraph wires at Ilkley on July 18th (*H. Walker, Nat.*, 1909, p. 344). Small parties were seen near Harrogate in the middle of July (*R. Fortune, t.c.*, p. 344). One was caught on the coast on September 26th. (*H. F. Witherby*).

**NORTH SEA.**—One in immature plumage came on board a steamer crossing to Hamburg when eighty-three miles off Spurn Head at 6.5 a.m. on August 1st (*C. S. Carter, Nat.*, 1909, p. 344).

**NORFOLK.**—On July 8th the gardener at Northrepps observed twelve Crossbills on a young spruce-fir only some twelve yards from the drawing-room window. On the 10th they were further from the house but had increased in number to sixteen, and from that date until September 26th small parties of them were seen at or near the same place, but always on fir-trees of some sort, beneath which the cones on the ground testified to their destructive operations. Other flocks were seen during July and August at Martham, Bodham, Cromer (three on September 4th), Hempstead and Cley; at the latter place, Mr. Pashley tells me, gardens in the middle of the village, including his own, were freely visited, possibly for the sake of plums. A young Crossbill in the striped plumage, but quite old enough to fly, was picked up alive on Yarmouth sand-dunes, and brought to Mr. Lowne, as well as two red males which were caught on a ship, one of which, together with the young bird, he has still alive. As lately as October 9th Mr. Gerard Gurney saw fourteen at Hempstead, and these are the last reported; perhaps most of them have now moved further on (*J. H. Gurney*). Six were taken at the Outer Dowsing Lightship in July (*A. Patterson*). Adult male at Cley on October 2nd (*F. I. Richards*).

**NOTTS.**—A large number "a week ago" (say, end of August) at Worksop (*F. B. Hawkins, Field*, 4, IX., 1909, p. 464).

**BEDFORDSHIRE.**—Upwards of fifty seen on August 1st in the larch-plantation along the roadside between Sandy and Everton, and later in the morning a similar flock passed overhead between Everton and Potton, which may very probably have been the same birds (*J. Steele Elliott*).

**CHESHIRE.**—Quite a big lot at Bowdon now (October 15th) (*T. A. Coward*).

SHROPSHIRE AND WORCESTERSHIRE.—On August 6th, a party of eight passed over our valley at Dowles. Since when up to the time of writing (15th October), some have frequented this locality, which is on the borders of both counties. The flock varies in numbers, as many as fifteen or more being seen on September 29th, and at other times only an odd bird will be seen or heard on the wing. It seems rather remarkable that their stay with us should be so continued, as the larch-trees, upon which they devote a considerable part of their time, are limited to some one hundred trees (*J. Steele Elliott*). About twenty were seen near Myddle Salop on September 24th and since (*H. E. Forrest*).

GLOUCESTERSHIRE.—A male, picked up dead against some wire-netting at Mitcheldean on September 27th. Several flocks (10-20 birds each) seen middle of October (*N. F. Richardson*).

BERKSHIRE.—Male in red plumage at Calcott Park, Reading, on September 15th (*F. J. Stubbs*).

HERTFORDSHIRE.—Flocks were seen in the woods near Tring in August, a male and female was shot on September 28th and three males on October 2nd near Tring (*E. Hartert*). A flock of about 15 seen on July 30th, and others heard and seen since up to the middle of September, near Watton (*Rev. Allan Ellison*).

SURREY.—Several small flocks at Leatherhead, from about the middle of September to October 16th, 1909 (*P. F. Bunyard*).

SUSSEX.—Two (a green and a red one) seen on September 10th at Maresfield; one on September 11th and two on September 22nd; four on September 22nd and five or six (one adult) on September 28th at Uckfield (*R. Morris*).

SPAIN.—Mr. Abel Chapman writes:—"Mr. B. F. Buck informs me that: 'The Crossbills were first observed in Andalusia on July 17th, 1909, but had probably arrived some days earlier, as "curious birds" had been reported. They were in the pine-trees, but seven which I got were caught on the ground in a net. There was one red one, a cock presumably, but unluckily the cat got him. They all died in captivity; we could not find out what they needed to eat. I heard and saw them all the rest of July and up to the end of August. A Spanish idea was that the Crossbills had come over from Africa owing to the *firing at Melilla!*' Note that there were many Crossbills in the pine-woods of Coto Doñana in the preceding

February (1909).”\* Five Crossbills were obtained near Madrid, where it is a great rarity, during the summer, according to Herr Kracht.

FOOD.—They have been reported to us as feeding upon seeds of grass, “weeds,” pine, spruce, larch, alder, and on spruce-aphis† and green fly. Mr. W. Eagle Clarke (*loc. cit.*, p. 217) states that in the islands of Scotland they have resorted to the following makeshifts for their more usual food:—The yellow centres of daisies at Lerwick; flowers and berries at Fair Isle; and sea-pinks at the Flannans.

ORIGIN AND CAUSE OF THE IRRUPTION.—The records we have published show that the irruption has been of enormous extent and that countless numbers of Crossbills have been involved in it. There is no doubt that a great number if not all of these birds have come from northern Europe. Mr. Clarke (*loc. cit.*) has received a number of specimens taken in various localities in Scotland and *all* these he affirms belong to the typical continental form *Loxia curvirostra curvirostra*, which can be readily distinguished from the much larger-billed Scottish race (*L. c. scotica*). Moreover, we have the evidence of birds coming on board ship in various parts of the North Sea. In Fair Isle and in the Flannan Islands several specimens of the Two-barred Crossbill (*Loxia bifasciata*), a native of northern Russia and Siberia, were detected amongst the flocks of the commoner species (*cf.* W. E. Clarke, *loc. cit.*, p. 217). Furthermore, a large movement has been observed upon the Continent; they were seen in Heligoland in June and July, and near Berlin, early in July passing westward, and on September 19th; they have also been observed in the Rhine provinces, near Aix-la-Chapelle, in the Northern Eifel (August 9th), near Baden, in the Black Forest, near Leipzig (June 27th—July 24th), in Pomerania and in Mark Brandenburg (end July). With regard to those which have been reported from so many parts of England, there can be no doubt that most of these birds form part of the irruption from the Continent, though some are likely to have been bred in England. Unfortunately, the differences between the English Crossbills and the continental form, as pointed out by Dr. E. Hartert in

\* Mr. Abel Chapman has very kindly sent me two specimens of these Crossbills, which I have submitted to Dr. E. Hartert, who pronounced them to be undoubtedly of the distinct Spanish form *Loxia curvirostra hispana*. This incursion of Crossbills into Andalusia has therefore no direct connection with the irruption from northern Europe.—H. F. W.

† Some specimens shot in the act of feeding upon the galls had many immature *aphidæ* (*Chermes abietis*) in their gizzards.

volume 1, page 209, do not hold good. So that it is not possible to say if the specimens most kindly sent by a good many of my correspondents are actually of continental origin or not. Dr. Hartert, to whom I have submitted the specimens, writes me as follows:—

“ In 1894, I gave names to two British races, *i.e.*, the Scottish and the English Crossbills. The former, which has a very high beak, approaching that of *L. pityopsittacus*, I called *Loxia curvirostra scotica*, the latter *L. curvirostra anglica*. About the former there could be no doubt: birds with such bills, and with a length of wing, intermediate between continental *L. curvirostra* and *pityopsittacus*, are known only to breed in Scotland. About the English race I have always felt somewhat uneasy, yet, with the large series which I examined at the time, it seemed to be evident that the hundreds of continental birds at my disposal were very often of a bright red, which I never found in any British example. Moreover, the beaks of English birds were never so small as they frequently are on the Continent, and often approached my *scotica*. On the other hand, birds with equally large bills were found on the Continent, and since 1904 I have seen many more of them.

“ Of course, when I named my *anglica* I had no evidence that any of the British birds which I had examined were immigrants, but I believed them to be—with one or two exceptions—native English birds.

“ This year it has been proved, that flocks of Crossbills have crossed the sea between Norway and Scotland, and an invasion of Crossbills has been observed throughout Central Europe as far south as Italy.

“ Now, while I decidedly maintain my *scotica*—which Scotch ornithologists also recognize, Mr. Eagle Clarke, for example, having at once noticed that this year's immigrants were quite different from the native Scotch Crossbills—I am quite willing to give up my *anglica*.”

As to the cause of the irruption, there seems no evidence as yet upon which to base a conclusion, but it is to be hoped that our fellow-ornithologists on the Continent may discover if, for instance, Crossbills have been unusually prolific this year, and if for some reason the food-supply in their usual haunts subsequently failed.

H. F. W

#### · DIMORPHISM IN THE CROSSBILL.

So far as the material at my immediate command goes, the upper mandible of the Common Crossbill (*Loxia curvirostra*)

is sometimes to the right of the lower, and in some individuals to the left. The muscles for *opening* and closing the jaws, and those parts of the skull to which they are attached, are far larger on the side to which the lower mandible is twisted. The bird thus provides an instance of pure dimorphism, which is a much rarer thing than dichroism in British birds; indeed, it is probably the only case.

FREDK. J. STUBBS.

### TWO-BARRED CROSSBILLS IN SCOTLAND.

AMONG the flocks of Common Crossbills at Fair Isle and also at the Flannan Islands "adult males of the Two-barred Crossbill (*Loxia bifasciata*) were detected and obtained" (W. E. Clarke, *Ann. Scot. Nat. Hist.*, 1909, p. 217).

### LATE NESTING OF THE CIRL BUNTING.

I CAN confirm Mr. Norman Gilroy's note as to the late breeding and abundance of the Cirl Bunting (*Emberiza cirlus*) in south Devon (*antea*, p. 125). In the course of a few weeks' stay in south-east Devon in August on the coast, I found five nests of this species up the various "coombes" within a radius of a few miles, besides seeing several broods of flown young, fed by the parent birds. One nest contained—on August 28th—three eggs, a few days incubated. The other nests had young in various stages; two nests with four young each, one with two young, and one with one young bird. The latest date on which I saw young in the nest was September 2nd.

All the nests were built in roadside hedges and—as I have invariably found to be the case—placed on the fieldside of the hedge and clear of the ground or bank. Green moss was largely used in the construction of these nests, a material rarely found in the nests of the Yellowhammer. One of the reasons for the late nesting may be the prevalence of the common grasshopper in August, which in this month I found formed the chief food-supply of the young as noted by Montagu in south Devon in his day. It is probable that the bird in some seasons, like the Yellowhammer, is treble brooded in the south-west counties.

The Cirl Bunting and Yellowhammer were the only birds in song, the former being the most in evidence, often singing when the hen bird was feeding young in the nest.

SIDNEY G. CUMMINGS.

## ORTOLAN BUNTINGS IN NORFOLK.

AN unusual number of Ortolan Buntings (*Emberiza hortulana*) have appeared in Norfolk this autumn. I can vouch for the following at Cley:—Sept. 11th, one; Sept. 13th, two; Sept. 14th, one; Sept. 16th, one; Sept. 23rd, one. Three or four more birds, believed to have been of this species, were seen between these dates, but their identification was not so certain as to warrant their being recorded.

F. I. RICHARDS.

## A LATE SWIFT IN NORFOLK.

ON October 10th, at Sheringham, I saw a Swift (*Cypselus apus*). There was only one flying about with some Martins, and there could be no doubt about its identification for it came once or twice quite close to me.

H. M. UPCHER.

## NOTES ON THE BREEDING OF THE NIGHTJAR.

ON June 15th last I found an egg of a Nightjar (*Caprimulgus europæus*), on some charred remains at the bottom of a burnt whin-bush. On June 19th there were two eggs of the usual type. The first young bird was hatched on July 3rd, the other on July 4th, so incubation lasted eighteen days. I have noticed in this and other instances that the Nightjar does not carry the empty egg-shells away from the nest but leaves them where the young are hatched and often with one half enclosed within the other. At first the young are covered with extremely fine long downy feathers, but the head is practically bare of feathers. The beak has a knob-like termination. The nostrils are conspicuous round openings, raised considerably above the surface of the maxilla, and surrounded with a double row of setaceous-like feathers. The young are able to crawl from the nest when a day old. The growth is rapid. They are about double their size in a week, the feathers of the wing and tail being then most distinct. They are timid creatures and show their objection to intrusion by raising their heads up and down and opening their mouths as wide as possible, at the same time giving vent to a faint hissing sound.

Often they leave the nest and hide. When two weeks old the parent birds removed the young fifteen yards from where the eggs were laid to another burnt whin-bush, though there was plenty of green cover in the shape of

bracken and live whin near the original spot. At the beginning of the third week the young and old birds were gone and I failed to find them.

J. S. T. WALTON.

### COMMON SCOTER BREEDING IN IRELAND.

A PAIR of Common Scoters (*Edemia nigra*) have again this year nested on an island in an Irish lough, which they have frequented for some months in each year since 1904 inclusive



Site of the Nest of the Common Scoter on an island in an Irish lough, June, 1909.

(*cf.* Vol. II., pp. 86-87). On June 13th I found a single egg in a depression in coarse grass, which was under some oak-scrub; the egg was within three feet of the edge of it, and about fifteen yards from the water. It was well concealed from view, from all sides and from above. On re-visiting the spot on the 17th there was a nest in a rudimentary condition, and in it were four Scoter's eggs and one of a Tufted Duck. Being uncertain as to the identity of the owner of the nest, I took one of the former, unnecessarily as it turned out, for on the 22nd I put a female Scoter off the nest, which contained six of her own eggs and the one of a Tufted Duck.

My man found the Scoter still sitting on the 11th July but did not disturb her. On the 18th he found the bird absent

and the eggs, five of her own and the one of the Tufted Duck, cold and covered with grass (in 1906 when the Scoter deserted, the eggs were also covered with grass). She did not resume her sitting, but was apparently alive and well on July 23rd, when I saw a female Scoter on the water a few hundred yards from the nest. On the 26th I photographed the nest and eggs, which latter were somewhat weathered. On breaking the eggs I found that those which were fertile appeared to be about half incubated. The 13th June is a late date for the duck to have commenced laying, but I feel pretty certain that a clutch of eggs I found on the 6th June, which had disappeared by the 13th, was laid by the same bird.

HERBERT TREVELYAN.

#### NUMBER OF EGGS LAID BY TERNS.

I HAVE read with considerable interest the notes on the number of eggs laid by Terns (*antea*, pp. 90 and 129), but I am quite unable to accept Mr. Gilroy's theory that the number in the clutch is regulated or in any way influenced by the food-supply, especially with birds that depend almost entirely on fish, small fry being particularly abundant during the breeding season within the feeding radius. I think it is generally agreed that climatic conditions play a very important part, and must regulate to a very great extent the size of the clutch. I have frequently noticed during very favourable seasons normal sets predominate and abnormal sets frequently occur, and apparently when food must be scarcer and far more difficult to obtain, we invariably find certain species laying *normally* large clutches. In Scandinavia the Redwing, Fieldfare, Brambling, Great Grey Shrike, Lapland Bunting, Red-throated Pipit, Rough-legged Buzzard, European Hawk-Owl, etc., all have large broods, while the following species on the average all have larger broods than is the case with the same species in *this country*:—Chaffinch, Reed-Bunting, Lesser Whitethroat, Raven, Merlin, Moorhen, Coot, Grebes, etc. Colonel Feilden called attention to the large clutches of the Wheatear in the Faroes, while doubtless Mr. Gilroy knows that the Skylark invariably lays five in North Uist, where the food-supply cannot possibly be so plentiful as in the fertile rural districts in the south of England, and where the normal clutch is from three to four, five being exceedingly rare. Age undoubtedly must play the most important part in the egg-producing powers of all birds: the fully adult birds, which would in all probability predominate in a large



colony of Terns, would lay the normal number, while the young and very old birds would be responsible for the short clutches.

During my visit to the Faroes in 1905 I visited the small island of Hoivig Holm, on which is, I believe, one of the largest colonies of Arctic Terns known, roughly computed at 1000 pairs. Only a very few of the birds had commenced laying; a few nests contained three eggs, all of which proved incubated on blowing, while all the sets of two taken were fresh, with one exception. This small series, when compared with the eggs of the Common Tern (which does not occur in these islands), proved on the average smaller, and a recent acquisition of an authenticated series from Scandinavia confirms my opinion that they are not only smaller, but richer and more boldly marked.

Regarding the Common and Lesser Tern, with which my experience has been considerable, I must confirm Mr. Gilroy's notes, namely, that three is the normal clutch in each case.

My time with the Sandwich Tern has been limited to a solitary visit in 1906 to one of the largest, but least known, colonies, which at the time consisted of 400 nests. I only saw *three* nests with *three* eggs, and some birds were sitting on one egg only. It is quite easy to see in this colony which birds have commenced to incubate by the complete ring of excreta which encircles the nest. I have not noticed this with the Common, Arctic and Lesser Tern. In this colony this year, as the watcher informs me, there were 385 nests and only three contained three eggs. The colony mentioned by Mr. Gilroy as having 99 per cent. of nests with three eggs must indeed be an exceedingly prolific one. In Holstein a large percentage of Sandwich Terns apparently lay three eggs. I have in my series ten sets from there, and, judging from the evenness of each clutch, they are perfectly genuine.

PERCY F. BUNYARD.

[Although it is obvious that in certain orders (such as the *Limicolæ* and *Tubinares*) the number of eggs cannot be affected by the food supply, it is a remarkable fact that those naturalists who have had the best opportunities for observing are unanimous in asserting that the *Raptors* of N. Scandinavia have exceptionally large clutches in years when the food supply is unusually plentiful. I need only refer to the works of Professor Collett and Mr. H. J. Pearson for corroboration of this statement. In our own country a parallel instance is that of the Short-eared Owl, which, during the vole-plague of 1890-92 frequently laid clutches of ten, and occasionally as

many as 13 and 14 eggs, and reared two broods in the season (see *Ann. Scot. Nat. Hist.*, 1892, p. 219).—F. C. R. J.]

### DIMORPHISM IN YOUNG TERNS.

IN his notes on Terns (*supra*, p. 169) Mr. H. W. Robinson remarked on the dimorphism exhibited by the downy young of the Common Tern. Some time ago my brother called my attention to the possibility of this, but no opportunity has since occurred to either of us to investigate the point, so that I was glad to see Mr. Robinson's observations, though it would be of greater value if he could give us a more detailed description of the two forms. During the last nesting season, however, I was able to make an examination of a large number of young Arctic Terns (*Sterna macrura*) up to the age of four or five days, and I was not surprised therefore to find that they were also dimorphic. In the light form the general body-colour was a creamy white, in some almost quite white, with a touch of rufous on the forehead. The back was marked with spots and indistinct lines of black, and there was a black band across the upper throat and chin; breast and upper part of belly, white with a wash of pale slate-colour on the flanks and vent. In the dark form the lower parts and all the black markings were the same, but the general colour of the upper parts was brownish or rufous white, the rusty tint being most marked on the shoulders and humerus; this varied in intensity a good deal in different examples and in a few was almost absent, but the two forms were always easily separable. In both forms the legs and bill were coral-pink, but those of the pale form were several shades lighter than those of the dark. In the particular colony which I had under observation the dark form was much the most numerous, in the proportion, I should say, of quite three or four to one, and both were found in the same nest.

N. F. TICEHURST.

### THE YOUNG OF TERNS.

I HAVE often remarked the swollen tarsi in young Terns described in Mr. Robinson's note (*antea*, p. 169). This peculiarity is, I believe, found in a greater or lesser degree in the young of all *Limicolæ*. It is most conspicuous in the living bird, but may be traced in some dried specimens; in the Lapwing the thickening remains after the bird is able to fly. I do not remember seeing it except in Gulls and Plovers and their allies, but the sight of the swollen ankle

of a young Snipe has reminded me of the curious pad on the leg of the nestling Wryneck figured so long since by Nitzsch. The subject is certainly worth the attention of embryologists.\*

Surely the white spot on the bill can be nothing but the "egg-tooth" so noticeable in the young chicken. I have frequently observed it in both Terns and Gulls, and remember that its connection with the rhamphotheca is not very intimate; it falls off at the slightest touch, either in life or death, and leaves no trace of its former presence.

FREDK. J. STUBBS.

#### DISEASES IN YOUNG BLACK-HEADED GULLS AND COMMON TERNS.†

SEEING that my name is mentioned in Mr. Robinson's interesting notes on the breeding of the Common and Sandwich Terns (*antea*, p. 169) and lest it should be taken for granted that I am in entire accordance with regard to the statement that "starvation and the gape-worm are the main causes of death amongst the young Black-headed Gulls," I should much prefer at present that it be recorded that certain small red worms were found in the windpipes of certain of the dead Gulls, and that I drew Mr. Robinson's attention to them, saying they *appeared* exactly similar to the gape-worm seen in the windpipes of domestic poultry suffering from "gapes." I should not like to go so far as to say definitely, that these red worms found in the throats of some of the defunct Black-headed Gulls were the same worm as is found in the throats of domestic fowls, and which is known at present as *Syngamus trachealis*.

The disease which Mr. Robinson mentions as destroying the feet of some of the young Common Terns, is extremely interesting and is, I think, worthy of further consideration. The feet appear to be infested with open sores and in some cases, to be gradually eaten away. The explanation which seems most feasible at the moment is, that the young Terns,

\* The conical, horny papillæ which are found on the "heels" of nestling Woodpeckers, Wrynecks, Barbets, and nearly related forms are purely superficial, epidermal structures, and bear no relation to the swollen proximal ends of the tarso-metatarsi in the young of Terns and Plovers, notably the Norfolk Plover or "Thick-knee," for this latter swelling is confined to the bony skeleton.—W. P. P.

† Mr. Robinson sends us the following correction to his note on this subject:—"In line 10 from the bottom of page 169 (*supra*), where it is stated that 'several blue and white eggs were seen,' I should have added, 'with dark markings' and that those with a white ground were much rarer than those with a blue one, only three of the former being seen by myself."

during the time they are running on the ground, occasionally get the soft membrane of the feet punctured by contact with sharp thistles and bents, and that small fine grains of sand work their way into these holes, causing inflammation and sores, which gradually increase, owing to the constant irritation caused by continual contact with the sand; as time goes on the portions of the feet so affected gradually atrophy, and the bird becomes partially or wholly lame.

F. W. SMALLEY.

#### GREAT CRESTED GREBE, DOUBLE-BROODED.

I WAS one of the competitors for the Bird Protection Society's Shield in this year's competition, and I wrote an essay on the Great Crested Grebe, having watched a pair of these birds on one of the ponds in Woburn Park all the year. This pair of birds had two broods, the second brood being hatched the third week in July. As soon as the second brood was hatched the old birds drove the first family off the pond. I used to see the old birds feed the young ones on feathers which they pulled out of their breasts, and the young ones also pulled feathers out of the old birds for themselves.

W. ROBERTS.

#### MANX SHEARWATER IN WARWICKSHIRE.

A MANX Shearwater (*Puffinus anglorum*) was picked up at Brownsover about two miles from Rugby, on the night of September 7th, and brought next morning to Mr. H. Boughton Leigh, with whom I was staying. The bird was a female in good condition. Mr. Gunn, of Norwich, to whom it was sent for preservation, mentions having received other examples from Wolverhampton and Dennington (Suffolk) at about the same time.

A. L. BUTLER.

\* \* \*

DEATH OF DR. E. REY.—On August 30th, 1909, Dr. Eugène Rey, of Leipzig, the well-known Oologist and specialist in Cuckoo's eggs, died at Leipzig in the seventy-second year of his age. His most valuable work was the *Altes und Neues aus dem Haushalte des Kuckucks*, published in 1892, and still far too little known to English naturalists. In this work he demonstrated for the first time that each female Cuckoo as a rule deposits her eggs in the nests of one species of bird, and makes use of a limited district for this purpose. All the eggs

laid by one hen are similar in appearance, and about seventeen to twenty-two are laid in a season on alternate days. In comparing these results with those arrived at by English observers it must be remembered that in the neighbourhood of Leipzig over eighty per cent. of Cuckoos' eggs are laid in nests of the Red-backed Shrike. Moreover, the nature of the country, which is arable, devoid of hedges, and only sparsely wooded with small plantations, renders it possible for an energetic bird's-nester to make practically certain of inspecting every Shrike's nest in a given district. In a country like England, with its innumerable hedgerows, gardens, and woods, such systematic working of the ground is not possible except to a very limited extent. But the most convincing proof of the truth of Dr. Rey's conclusions is the sight of his wonderful collection of nearly one thousand Cuckoos' eggs, with long series of eggs obviously laid by the same hen, in a single season, and in some cases in consecutive years, all carefully marked by De Rey in the same painstaking way in which all his scientific work was done. I cannot conclude without paying a tribute to his kindness of heart and hospitable spirit; and shall always retain pleasant recollections of my visit to the man who has done more than any other to elucidate the breeding habits of this mysterious bird.

F. C. R. JOURDAIN.

THE USE OF DOMED NESTS.—Mr. R. J. Ussher (*Irish Naturalist*, 1909, p. 223), commenting on Mr. C. B. Moffat's paper, suggests that one of the objects of the domed nest is to provide warmth for the young, and that in every case mentioned, with the exception of the Magpie, the eggs being white or nearly white, are less conspicuous when covered by a dome which closely resembles its surroundings. My own experience of the Dipper's nest is, that it is not uncommonly found within range of the spray of a waterfall, and some nests are literally soaked with dripping water, but Mr. Ussher considers such sites unusual. Mr. D. Dewar points out that the Indian species, which make covered nests, do not lay unusually large clutches of eggs, and thinks that domed nests have no particular significance.—F. C. R. J.

ADDITIONS TO THE SHROPSHIRE AVIFAUNA.—*Correction*.—"Roche" (*supra*, page 165, lines 11 and 14) should be "Rocke." The reference is to John Rocke's paper on Shropshire birds in the "Zoologist," 1864-65.—H. E. FORREST.

WEIGHTS OF UNBLOWN EGGS.—Mr. N. H. Foster (*Irish Naturalist*, 1909, p. 216) gives a further instalment, in continuation of his previous papers on this subject, in which the eggs of twenty species are dealt with.

WOOD-WREN AT LONDONDERRY.—Mr. D. C. Campbell records in the "*Irish Naturalist*" (1909, p. 207) that on April 17th and 18th last he heard a small Warbler singing, which from his description there can be little doubt was an example of *Phylloscopus sibilatrix* which has an extremely local distribution in Ireland and has not we believe previously been recorded from Londonderry.

WHITE-THROATED SPARROW AT THE FLANNAN ISLANDS.—A male of the White-throated Sparrow or Bunting (*Zonotrichia albicollis*), an American species, was shot on May 18th, 1909, on Eilean Mor, Flannan Islands (F. Smalley, *Ann. Scot. Nat. Hist.*, 1909, p. 246). This species has occurred previously at Aberdeen, as well as in Holderness, Yorks, and near Brighton, but it is most probable to suppose that all these birds escaped from ships coming from America.

RUDDY SHELD-DUCK AT SULE SKERRY, ORKNEY.—An adult female *Tadorna casarca* was obtained on this remote island on June 18th, 1909, and was forwarded in the flesh to the Royal Scottish Museum. The species had not previously been recorded from any of the northern isles of Scotland (W. E. Clarke, *Ann. Scot. Nat. Hist.*, 1909, p. 247).

BLACK-TAILED GODWITS IN SCOTLAND.—An example of *Limosa belgica* was seen on April 23rd, May 3rd and 21st, June 4th, and August 30th, 1909, in company with Bar-tailed Godwits in Cromarty Firth (Annie C. Jackson, *Ann. Scot. Nat. Hist.*, 1909, p. 247). One was shot at Morton Loch, Tentsmuir, Fife, on August 20th, 1909 (W. Berry, *loc. cit.*). One frequented the west side of Iona from September 21st to 26th, 1908 (*t.c.*, p. 212).

SABINE'S GULL IN SHETLAND.—Mr. J. S. Tulloch observed a gull at Lerwick on July 25th, 1909, which from his description (distinct black collar, dark grey cap, long forked tail, about the size of a Black-headed Gull) must have been an adult *Xema sabinii* (*Ann. Scot. Nat. Hist.*, 1909, p. 248).



# REVIEWS

*The Home-Life of a Golden Eagle.* Photographed and described by H. B. Macpherson. (Witherby & Co.) Crown 4to, pp. 45, and 32 plates, 5s. net.

AFTER waiting three years Mr. H. B. Macpherson has been able to carry out his determination of making an intimate study of the home-life of a pair of Golden Eagles and their young, and in the present artistic volume he has given us a detailed account of his observations illustrated with a unique series of photographs. The number of Eagles' eyries must be extremely small which are so situated as to afford an environment that can be turned to account by the naturalist-photographer, and Mr. Macpherson must be accounted a lucky man to have found such an one. Fortune must ever be a factor in this, as in most other ventures of the sportsman or naturalist, but this does not in the least detract from the ability, perseverance and endurance that is called for in making the best use of such an opportunity when it occurs.

Situated in a gloomy corrie in the heart of the Grampians at a height of close upon 3000 feet, this Eagles' nest was on a ledge that could be approached fairly easily from both above and below. At a convenient spot on the ledge some 200 feet above the brawling burn and close to the nest, the author excavated a hole two feet deep and built up walls of stones on three sides, roofing his hiding-place with canvas, covered with grass and heather. For the best part of three months he visited this almost daily, walking to and from the nest, in the aggregate, as he tells us, well over a thousand miles, and frequently remaining crouched beside his camera for twelve or sixteen hours a day, frozen by the nipping cold winds, often drenched to the skin, and exposed later on to the attacks of biting insects with which the nest swarmed as the young birds grew. Such persistence and endurance can really be only fully appreciated by one who has (although in a milder way) followed similar pursuits, and a full appreciation of the difficulties renders our admiration of the results achieved all the more enthusiastic. Mr. Macpherson is to be heartily congratulated on the success of his undertaking, and British ornithologists are indebted to him for a unique account of the nesting habits and early life of our noblest British bird, which after years of persecution has at length received, we are glad to note, that measure of protection it so richly deserves. Such investigations as those of the author, ac-



“ SHE OFFERED THE INFURIATED YOUNGSTER A BUNCH OF HEATHER.”

*(From the “Home-Life of a Golden Eagle.”)*



accompanied by such telling examples of what the camera is capable of recording, must go far towards promoting that study of the wild life of our islands which is gaining such a hold on the public of to-day. To all those who are interested in this study we can heartily recommend Mr. Macpherson's book.

The photographs are quite among the best of their kind that we have seen.

N. F. T.

*VIII. Jahresbericht (1908) der Vogelwarte Rossitten der Deutschen Ornithologischen Gesellschaft.* By Dr. J. Thienemann (reprinted from the *Journal für Ornithologie*, July, 1909.)

THE chief interest that this report will have for readers of BRITISH BIRDS lies in the pages (432-470) devoted to the results of the bird-marking enquiry. During 1908, 31 "returns" were got, including 11 Storks, some of them from Africa. These African returns have been published, however, in a separate paper, referred to already in these pages (*supra*, p. 86, see also Vol. II, p. 366). More important are the summaries of all the returns for Hooded Crows (*Corvus cornix*) and Black-headed Gulls (*Larus ridibundus*) since the beginning of the enquiry. Of the Crows we need say little, the results having been already described in BRITISH BIRDS (Vol. II., p. 364-6), since which time the returns have merely afforded confirmation of the facts already ascertained. It may be mentioned that particulars are given of 111 Crows re-obtained, out of a total of 909 marked, the percentage of returns now standing as high as 12.2, which is encouraging news to those who are taking up this method of migrational study! The returns are also marked on one of the maps, a glance at which should convince the most sceptical person of the value of bird-marking. 616 Black-headed Gulls have been marked at their nesting place at Rossitten, and of these 40 (=6.4 per cent.) have been heard of again and are recorded in this report. On the strength of these, Dr. Thienemann now lays down three routes:—(a) along the south coasts of the Baltic and North Sea, and down the east coast of France as far as Bordeaux; (b) the same as far as the Zuyder Zee, and then crossing the continent by the Rhine and the Rhone; (c) directly across the continent by the Vistula, Danube, Save, etc., forking at the head of the Adriatic and going a little distance down each side, and extended (not definitely marked)

to the south of Italy and to Tunis. This is less satisfactory than the conclusion reached with regard to the Crows : the records along these routes are few and far between, and do not, in our opinion, justify any more definite statement than that the Rossitten Gulls spread over Europe in southerly, westerly, and intervening directions from that place, tending, of course, to be found in the neighbourhood of the sea or of large rivers and lakes. Some better proof of the existence of such routes as are described is wanting. Time and further returns will certainly clear up this point, but in the meantime too much stress should not be laid on such hypothetical conclusions. Theorising at too early a stage of such an enquiry is to be condemned as likely to prejudice the final results. The report is an important addition to the literature of bird-migration.

A. L. T.

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## SEQUENCE OF PLUMAGES IN BRITISH BIRDS.

### I.—INTRODUCTORY.

BY

H. F. WITHERBY.

AN Editorial promise was given in the first number of the present volume to make a beginning, at all events, in describing the Sequence of Plumages which takes place

in our birds from the nestling to maturity, and from season to season.

It is extraordinary how little we know, notwithstanding all the present-day knowledge of British birds, of the Sequence of Plumages and the methods whereby these plumages are acquired in even our commonest species. In his "Dictionary of Birds" (p. 595) the late Professor Newton deplored the neglect of this important work by ornithologists, and remarked that there was little advance in our knowledge of the subject since the observations of Herr W. Meves were published in 1854.

In 1900, Dr. Jonathan Dwight, Jun., published an important monograph on "The Sequence of Plumages and Moults of the Passerine Birds of New York" (*Annals N. Y. Acad. Sci.*, Vol. XIII., pp. 73-360, October 31st, 1900). This, so far as I know, is the only connected and complete account of the cycle of plumages of any birds, though the extremely careful descriptions of many of the plumages of our birds by William Macgillivray, and the equally careful descriptions of Naumann, must not pass unnoticed, since these renowned ornithologists made a most diligent and painstaking beginning to what was in their time undoubtedly an impossible task to complete, owing to insufficient material.

The difficulties of obtaining material sufficiently complete to work out the changes of plumage in any one species are considerable. In most collections moulting specimens are conspicuous by their absence; few people take the trouble to determine, by a simple examination of the skull when an autumn bird is being skinned, whether it is young or old; many skins bear no adequate *data* regarding sex or date, and in describing plumages it is above all necessary to know by some other guide than the plumage itself, whether the bird is old or young, male or female. In the case of summer migrants, again, few African travellers seem to take the trouble to collect the "common" British species in their winter-quarters,



while it is also not easy to obtain examples of these and other birds in their juvenile and summer-plumages in this country owing to the close season. These are some of the difficulties which make it a lengthy task to examine sufficient material to enable one to detail all the plumages through which a bird passes, and this must be our excuse for proceeding with the descriptions by instalments as we are able to gather together the necessary material.

To those who have not studied the subject the sequence of plumages in various birds may seem to follow a fairly general rule, whereas in fact the way in which different birds change their plumage and the numbers of times they change it are extremely varied.

The plan upon which we propose to proceed in describing these changes is an adaptation of the excellent model which Dr. Dwight, in the paper mentioned above, has provided. Firstly, when the bird is hatched, it is either entirely naked or has a

**DOWN-PLUMAGE.**—A beginning has already been made in our pages by Dr. C. B. Ticehurst, Mr. W. P. Pycraft and others, to describe some of these plumages, and we hope that these contributions will continue.

This plumage is succeeded by what we shall term the

**JUVENILE PLUMAGE.\***—This is acquired by a complete moult. Possibly in a very few cases this plumage is not to be distinguished from that of the adult, but if there are such cases they must be very rare and the Juvenile plumage is generally possible and often easy to distinguish from that of the adult. In some cases when the adult male and female differ the Juvenile more nearly resembles the female, while in some cases where the sexes of the adult are the same the Juvenile resembles somewhat nearly the adult plumage. But more often the Juvenile differs markedly from the adult. It may be spotted or streaked, it may have

\*Dr. Dwight has coined the word "Juvenal" to describe this plumage, but this is an "Americanism" which we feel it our duty to resist.

the feathers broadly edged with a light colour, giving it a most distinctive appearance, it may be duller than the adult, or it may be totally unlike it.

After discussing the Juvenile plumage our plan will be to describe the succeeding plumages of the young bird until it becomes indistinguishable from the adult. The next plumage to consider in the great majority of birds will be the

**FIRST WINTER-PLUMAGE.**—This is acquired by a moult—in some species of a complete, and in others of a partial nature. Many birds, for example, moult all the body-feathers but not those of the wings and tail; others moult all except the remiges; while others have a complete moult. In some species the first winter resembles the adult winter-plumage; in others there are slight points of difference; while in others the plumage is still markedly different. Continuing we shall proceed to describe the

**FIRST SUMMER-PLUMAGE,**

**SECOND WINTER-PLUMAGE,**

**SECOND SUMMER-PLUMAGE,**

and so on, until the bird becomes adult, when we shall proceed to the moults and plumages of the adult, beginning with the

**ADULT WINTER-PLUMAGE.**—This is invariably acquired by a complete moult and is succeeded by the

**ADULT SUMMER-PLUMAGE.**—This in some cases has much the same appearance as the previous plumage; in others it is different, and is acquired by a complete moult, by a partial moult, or by abrasion and loss of certain parts of the feathers—a process which sometimes causes as striking a change in the bird's appearance as in cases where a complete moult has been undergone.

In the large majority of cases the Sequence of Plumages will thus be complete, but in a few species it will be necessary to discuss other and intermediate plumages.

## THE WOOD-PIGEON "DIPHThERIA."

THE RESULTS OF THE SECOND "BRITISH BIRDS" ENQUIRY.\*

BY

C. B. TICEHURST, M.A., B.C., M.R.C.S., M.B.O.U.

DURING the winter of 1908-9 the readers of BRITISH BIRDS were invited (see Vol. II., p. 199) to send in any observations they were able to make on the presence or absence of this disease in various parts of Britain; the results (such as they are) of this enquiry I now set forth.

Only about forty schedules were received from seventeen counties of England and Wales, three from Ireland, and two from Scotland.

Twenty-five observers in districts scattered over seventeen counties of England and Wales, one from Scotland, and one from Ireland, were unanimous in their report that—

- (1) Wood-Pigeons were either *far less numerous* than usual, particularly migratory birds, or (in a few places only) up to the usual average.
- (2) The acorn and beech-mast crop was very scanty or non-existent, though in most places there seemed to have been as usual a plentiful supply of green food (turnip, clover, cabbage, etc.).
- (3) There was no sign of Wood-Pigeon "diphtheria."

Four observers in England and Wales, two in Ireland, and one in Scotland agreed that—

- (1) There were *more* migratory Wood-Pigeons than usual.
- (2) There was a plentiful supply of acorns, besides the usual green crops, and only in one case a plentiful supply of beech-mast.
- (3) There was no sign of Wood-Pigeon "diphtheria."

There were only eight places where the Wood-Pigeon "diphtheria" was noted, and in all these the numbers

\* For the results of the first enquiry, see Vol. II., pp. 69-77.

affected were comparatively few. In four of these places the Wood-Pigeons were much *above* their usual numbers, the acorn crop was *heavier* than the average, and the numbers of birds affected were *greatest*.

In the other four places there were *fewer* Wood-Pigeons than usual, the acorn crop was a *poor* one, and the numbers of birds affected were *fewest*.

It is interesting to note that, though in many places where the disease was prevalent in the winter 1907-8, there is no record of any disease, yet in three districts (in Surrey, Berkshire and Wiltshire) a few cases were again recorded; also that in two districts where the disease occurred, apparently no *migratory* birds had put in an appearance.

The prevalence of disease was greatest in two districts in Warwickshire and in a district in Montgomeryshire; a fair number of diseased birds was recorded from a district of Northamptonshire, and there were a few cases from Shropshire. As in the previous year, some districts of the same county in which the disease was prevalent were unaffected.

As in many districts this winter (1909-10) there seems to be an abundance of acorns and beech-mast, it seems probable that there will be another invasion of Wood-Pigeons; in any case it would be interesting to have another series of observations on this subject.

[The importance of this enquiry cannot be too strongly urged, and we would beg all our readers to keep accurate record during the winter of the movements of Wood-Pigeons and of the prevalence or otherwise of the disease and of the nature and quantity of the food-supply. *Negative* as well as positive evidence is particularly desired. A schedule is affixed to the inside of the cover of each copy of this number, and it is most particularly requested that these schedules shall be filled in with all the observations made from now up to the middle of March. The schedules should then be posted to us.—EDS.]

## MANX ORNITHOLOGICAL NOTES, 1905-1908.

BY

P. G. RALFE.

THE following information is additional to the ornithological record for the Isle of Man since the publication of the author's work on its birds at the end of 1905, and up to the end of 1908. For the sake of completeness some occurrences already recorded in other periodicals have also been included here.

During this period the breeding of the Short-eared Owl and Woodcock in Man has been established. Information regarding certain of its smaller birds is no doubt still imperfect, and the observation of English naturalists who may visit the island would be well directed to the investigation of localities likely to harbour species so familiar to them as, for instance, the Garden-Warbler, Tree-Pipit and Yellow Wagtail. There seems good reason to believe that the last-mentioned visits, and even nests in Man, but so far it does not seem to have been recorded with certainty.

**MISTLE-THRUSH** (*Turdus viscivorus*).—Many more nests have now been found on ledges of rocks and in walls, and in some treeless districts nesting in such situations must be looked upon as the normal habit of the species. In 1906 there was a nest in a "crane" in the limestone quarry at Scarlett; in 1907 one on a beam which bridged over a gap amidst the sheds and machinery of the same quarry.

**WHINCHAT** (*Pratincola rubetra*).—In May, 1907, another example was seen by Mr. F. S. Graves and myself near the farm on the Calf of Man. In 1908 a male specimen (the second) from the Point of Ayre Lighthouse was given by Mr. J. Bell to the Ramsey Museum.

**REDSTART** (*Ruticilla phœnicurus*).—On the night of May 12th-13th, 1906, a female was picked up at Langness Lighthouse. In 1908 Mr. J. Bell gave to the Ramsey Museum a male specimen which had been taken at the Point of Ayre Light, and a female was killed at Langness on September 23rd. This and the last species must both

- now be looked upon as regular in Man on passage, but we are still without record of them as summer residents.
- BLACK REDSTART** (*Ruticilla titys*).—About New Year's day, 1907, a female was taken in the Mooragh Park, Ramsey, by Mr. J. Gale, and ultimately given to the Ramsey Museum.
- SEDGE-WARBLER** (*Acrocephalus phragmitis*).—On May 13th, 1906, several were killed out of large numbers which appeared at Langness Light. I have seen a few on the Calf during migration.
- DIPPER** (*Cinclus aquaticus*).—The species continues to be seen on several streams—Sulby, Silverburn and Laxey. In 1907 Mr. Graves found another nest, which also remained unfinished, on Rhenass stream.
- LONG-TAILED TITMOUSE** (*Acredula caudata*).—There are occasional records, in winter, from various parts of the island. Mr. J. Bell assures me that some twenty years ago there was a nest at Kirby, near Douglas.
- COAL-TITMOUSE** (*Parus ater*).—In 1908 Mr. Graves found a nest at Ballamoar, Patrick, the first record with which I am acquainted.
- WHITE WAGTAIL** (*Motacilla alba*).—Of regular passage at Castletown in small numbers in the latter part of April and in May. It frequents the shingle beaches of the bay. Seen also at Jurby, by Mr. W. E. Teschemaker in May, and by Mr. Graves, near Peel, in August.
- WAXWING** (*Ampelis garrulus*).—In the winter of 1906-7 an example was taken alive by Mr. J. Gale, at the Windmill, Ramsey. It died in 1908, and was given to the Ramsey Museum.
- GOLDFINCH** (*Carduelis elegans*).—Further notices of broods in summer and flocks in winter have come from various parts of the island, and it is hoped that a substantial increase is taking place.
- TREE-SPARROW** (*Passer montanus*).—In 1907 Mr. Graves got eggs at Thornton, Douglas, and in the winter of the same year saw two or three birds at Sandhouse, near Peel.
- SHORT-EARED OWL** (*Asio brachyotus*).—In 1908 Mr. W. E. Teschemaker found a nest in the Curragh, which contained three young. He saw both the male and female birds. Another, also in the north of the island, was found and photographed in the same season by Mr. F. Harris. Other nests are again reported from the Crown lands,

both at Greeba and Archallagan. In November, 1906, a specimen with a broken wing was taken at Langness Light. In the autumn of 1907 the species seems to have been very common in the Southern district.

**COMMON BUZZARD** (*Buteo vulgaris*).—In June, 1907, a female specimen, now in the Ramsey Museum, was shot in Glen Auldyn. In the same month another example was caught by a Port Erin boatman asleep on the rocks on the west side of the Calf, and died after about a fortnight's captivity. In November and December of 1907 Mr. Graves and others saw a Buzzard, easily recognised by its lacking a tail, soaring and circling over Greeba, Curragh. This bird is said to have been shot also, but I have not been able to trace it further (*Zool.*, August, 1907, p. 308; *Naturalist*, 1908, p. 169).

**WHITE-TAILED EAGLE** (*Haliaëtus albicilla*).—A young bird of this species was obtained at Greeba on 12th December, 1907. This bird, which had still a patch of down on the breast, had been seen in the neighbourhood for two or three weeks, and had already been pursued and wounded. Its tail-feathers had been clipped when it was set up, but were said to have been considerably abraded, as if it had been in captivity.

**COMMON BITTERN** (*Botaurus stellaris*).—In March, 1908, a Bittern was shot by — Corlett, of Ellanrhenny in Ballaugh Curragh, and shortly after purchased for the Ramsey Museum. In January, 1909, another was obtained at Ellanbane, Lezayre, two or three miles distant.

**COMMON SHELD-DUCK** (*Tadorna cornuta*).—In the neighbourhood of Castletown the species seems to be increasing, and must nest numerously; a nest was found by the lighthouse boys in a hole near "The Arches," and another in a hole among the gorse on the brows between Ronaldsway and Santon River. Sheld-Ducks have also nested on the coast between Castletown and Poolvash.

**QUAIL** (*Coturnix communis*).—In 1908 Mr. W. B. Karran shot two (out of four seen) at Ballaghaue, Andreas, on September 15th and 19th (F. S. Graves, *in lit.*).

**TURNSTONE** (*Strepsilas interpres*).—In 1907 Mr. G. Storey, of King William College, observed about nine on the shore near Castletown on June 2nd.

**WOODCOCK** (*Scolopax rusticula*).—Mr. F. S. Graves learned that in 1906 a brood had been hatched in the Crown

plantation at Greeba, and subsequently ascertained that at least two pairs of Woodcock had nested there in that year, the nests being placed among the bracken under the young trees. The breeding of the species has now become regular there and probably elsewhere.

**KNOT** (*Tringa canutus*).—On September 11th, 1908, I saw two at Scarlett; the species must be very scarce, at least on our southern shores.

**SANDERLING** (*Calidris arenaria*).—I regularly see small numbers, associated with Ringed Plovers and Dunlins, in Castletown Bay in May, and again on the return migration in August and September. I have met with some under the same circumstances in May on the Jurby Sands.

**KITTIWAKE** (*Rissa tridactyla*).—A second small colony, as already recorded (*Zool.*, 1907, p. 309) exists on the south end of the Manx mainland.

**LEACH'S FORK-TAILED PETREL** (*Procellaria leucorrhoea*).—On December 5th, 1905, one was picked up in Well Road Hill, Douglas (*Zool.*, 1906, p. 194).

**MANX SHEARWATER** (*Puffinus anglorum*).—On July 2nd, 1906, Mr. C. Oldham, crossing from Douglas to Barrow, counted forty of this species during the voyage, scattered over the route, the first about seventeen minutes after leaving Man. the last, a small party, twenty minutes before entering the Walney Channel (C. O., *in lit.*). In the summer of 1907 Mr. F. S. Graves saw this Shearwater frequently between Liverpool and Douglas. In the *Zoologist* for 1908 (p. 429) Mr. H. B. Booth describes a migratory movement of some magnitude observed between Heysham and Douglas on August 31st, 1907, a flight five or six miles in width, making a S.S.W. course. On August 22nd, 1908, Mr. Graves saw one hundred close together half-way between Liverpool and Douglas, and a week later two in Douglas Bay.

**SLAVONIAN GREBE** (*Podiceps auritus*).—In October, 1906, a specimen was obtained near Ramsey (*cf.* J. C. Crellin, *I. of M. N. H. and A. Soc. Proceedings*, 1907, p. 100).



# NOTES

## RECOVERY OF MARKED BIRDS.

COMMON TERN (*Sterna fluviatilis*).—B.B., No. 4308, marked by Messrs. Robinson and Smalley at Ravenglass, Cumberland, on July 30th, 1909, as a nestling. Recovered at Espiña, in Galicia, Spain, on September 21st, 1909.

This bird was caught by a boy, and was kept alive for two days. The capture was heard of by a coastguard named Inocente Dieguez, who reported the matter to the British Vice-Consul at Corcubion, who in turn reported it to Mr. Thomas Guyatt, the acting British Consul at Coruña. I am deeply indebted to Sir Edward Grey for drawing my attention to this case, and to Mr. Guyatt for very kindly undertaking the strictest enquiries with regard to the matter, and returning me the ring with full particulars of the capture of the bird.

BLACK-HEADED GULL (*Larus ridibundus*).—B.B., No. 3326, marked by Dr. C. B. Ticehurst, near Bala, Merionethshire, on 12th June, 1909, as a nestling. Recovered near Warrington, Lancashire, on September 25th, 1909.

The bird was shot, and was kindly reported to me by Mr. T. Daintith, on the information of Mr. W. A. Nicholson.

HOUSE-MARTIN (*Chelidon urbica*).—B.B., No. 4171, marked by Messrs. Robinson and Smalley, at Stedday, near Lancaster, on August 31st, 1909, as a nestling. Recovered at Ewell, Surrey, on September 25th, 1909.

This bird was found stunned, and shortly afterwards died, having apparently hit a telegraph wire. It was kindly reported to me by Mr. T. O. Masters, who forwarded the ring.

MALLARD (*Anas boscas*).—B.B., Nos. 563, 564, 567, marked by Mr. J. H. Gurney at Keswick, Norfolk, in June, 1909, and shot at same place on November 2nd and 25th, 1909.

HERON (*Ardea cinerea*).—B.B., No. 3529, marked by Mr. J. R. B. Masefield, near Cheadle, Staffordshire, on the 19th June, 1909, as a nestling. Recovered on Trafford Marsh, near Chester, on the 16th November, 1909.

The bird was shot, and was kindly reported to me by Mr. H. Henshall.

REDBREAST (*Erithacus rubecula*).—B.B., No. 1222, marked by Mr. J. Bartholomew at Torrance, near Glasgow, on June 16th, 1909, was picked up dead at the same place on November 21st, 1909.

ARCTIC TERN (*Sterna macrura*).—"Country Life," No. 516, marked by Mr. Riley Fortune on the Farne Islands on July 17th, 1909. Recovered (caught) at the Barns Ness Lighthouse near Dunbar, Scotland, on August 23rd, 1909 (*Country Life*, Oct. 16th, 1909, p. 543).

BLACK-HEADED GULL (*Larus ridibundus*).—Vogelwarte Rossitten, No. 1289, marked by Dr. J. Thienemann at Rossitten, Germany, on July 16th, 1908, as a half-fledged nestling. Recovered (shot) on Breydon Water, Norfolk, on October 15th, 1909.

Mr. A. H. Patterson has kindly sent me this bird, which was in adult plumage. Dr. Thienemann, of the Rossitten Bird Observatory, to whom I communicated the occurrence, kindly gave me the above details of the ringing of the bird, and informs me that this is the first Black-headed Gull to be recovered in England. One of the routes laid down by Dr. Thienemann for this species is along the west (not east, as printed *supra*, p. 207) coast of France, but this route is based apparently on only two recorded recoveries!

H. F. W.

WIGEON (*Mareca penelope*).—Aberdeen University, No. 2052, one of a brood of five marked at the head of Loch Brora, Strath Brora, east Sutherlandshire Scotland, on June 19th, 1909, by Mr. F. Gunnis, of Gordonbush, Brora. Recovered at Westpolder (information through Mr. H. J. Louwes of that place), Ulrum, Province Groningen, north-eastern Holland, on September 3rd, 1909.

The bird had therefore borne the ring for two months and a half, and had travelled about 500 miles in a south-easterly direction.

A. LANDBOROUGH THOMSON.

#### MIGRATION IN THE MEDITERRANEAN.

I was very interested to see Commander Lynes' conclusions as to migration routes across the Mediterranean (*supra*, pp. 136-9). This spring I happened to be passing down the Mediterranean during a part of the migration season and took particular note of all birds which I saw. The weather was very calm and fine, and remarkably few birds were met with, but curiously enough the one place where any number was seen was in 35° 10' N., 17° 40' E., or right in the middle of Commander Lynes' sea-area IV., where he tells us only odd stragglers are met with during abnormal weather conditions. Turtle-Doves were the only birds in any number, and every twenty minutes or so, all the morning on April 25th, when in about

this position, these birds passed in twos and threes. They were flying about six to ten feet above water in a most businesslike way, and did not seem at all lost, in fact none settled on board and only one circled round the ship for a few minutes until, being joined by two others, all three went straight away due N. by E. out of sight. The weather at the time was dead calm, hot, and cloudless. As near as I could reckon we were 190 miles equidistant from Malta and the nearest point on the African coast. I may also mention that a Blue-headed Wagtail (*M. flava flava*) which came aboard when in this position was still on board when we sighted Alexandria!

C. B. TICEHURST.

### THE MEANING OF BIRDS' SONGS.\*

THE reptiles of to-day have little or no voice, and it is probable that the particular reptiles that were the ancestors of birds were almost voiceless. But as soon as the power of flight was developed and long journeys became possible, some special means of bringing the sexes together must have been an urgent need, especially in the case of birds that haunt woods and thickets.

It seems to me, therefore, that we must hold that the call-note was the germ of the song, in fact that a bird's song is a glorified call-note, a call-note that has been elaborated for sexual purposes, so as to be of service not only for attracting the attention of one of the other sex, but for exciting sexual emotion. That many birds sing in winter when they have no thought of nesting is no objection to this view, for when an organ has once been developed to meet a definite need, the animal that owns this organ may take a pleasure in its exercise even when there is nothing to be gained by it. The power of flight is a *sine qua non*, not a mere luxury to most birds: but many of them, e.g., Gulls, perform gyrations in the air for pleasure pure and simple, so strongly do they feel the "mere joy of living." In the same way mere superabundance of vitality drives a boy or man to play football, but the combativeness and the love of play, for which football is an outlet, are essential to a virile race.

F. W. HEADLEY.

IT is perhaps not generally known that when a Skylark is being closely pressed by a Merlin it will frequently—indeed, almost always—utter a low, twittering song. This is especially

\* Dr. P. R. Lowe writes that in his note on page 183, line 14 from bottom, "or nestling stage" should read "or resting stage."

noticeable when the bird is first driven from the ground and during the earlier stages of the flight. This song is evidently an expression of fear and is quite distinct from its usual melody. Mr. Guy Blaine, who has successfully flown Merlins for a number of years, writes to me as follows:—“Late in September, when the Larks have completed their moult and are confident of their powers of flight, I have actually known them to rise up before a Merlin, singing all the time and to continue their song into the sky.” In this case, of course, the song is normal and is perhaps “the ebullition of superfluous energy” described by Mr. Stubbs.

When fighting together many birds (Skylarks and Robins are good examples) give vent to a series of angry twitterings: these sounds very frequently develop into a defiant and well-defined song.

COLLINGWOOD INGRAM.

### NUMBER OF EGGS LAID BY TERNS,

AND THE EFFECT OF FOOD-SUPPLY ON FECUNDITY.

ON July 2nd, 1904, I visited a large colony of Arctic Terns (*Sterna macrura*) off the coast of co. Mayo, and here I found that out of about 130 nests examined, only one had three eggs, a few one egg only, and the rest two eggs.

C. B. TICEHURST.

I NOTE with interest Mr. Bunyard's remarks in your last issue, and appreciate what he says regarding the regulation of the size of clutches by climatic conditions. I adhere absolutely to my contention, however, that the food-supply is in most cases responsible for the size of the clutch, and I should like to point out that I support this by the fact that all my observations are personal ones and taken on the spot.

Ravens on the coast almost invariably lay more eggs than inland birds; where rabbits are abundant the Buzzard is more prolific; where the Sparrow-Hawk is allowed to have its own way, clutches are larger; and to go back to Terns, the fry which forms the large proportion of the food-supply is certainly more abundant on the east and north coasts than on west and south. The Wood-Lark in the sandy districts of Norfolk very frequently lays five and, occasionally, six eggs, whereas in Wales, where the favourite food is not so abundant, the clutch does not often exceed three. I know that in the Orkney Islands the Skylark frequently lays five eggs, but although such occurrences are much rarer in the south I

have seen five eggs fairly often in clutches laid in *late June and early July*, in Norfolk and Sussex, when food is very abundant.

NORMAN GILROY.

FURTHER to my note on this subject (*antea* pp. 198 and 199) I am quite aware that some authors attribute the large clutches of eggs laid by the Rough-legged Buzzard, Snowy Owl, and other birds, to the abundance of food, more especially to the lemming, but in the absence of any concrete evidence to verify this suggestion, I am led to believe that an error has been made. To my mind, it is obviously wrong and contrary to the rule of nature. However, I am collecting evidence, and, so far, the onus of proof is certainly against the theory. On the return of my Scandinavian correspondent from Siberia, I hope with his assistance to prove my point conclusively.

PERCY F. BUNYARD.

THE recent correspondence on the subject of the number of eggs laid by the Arctic Tern has introduced the much wider and more important subject of the relation between the food-supply of a given species and its powers of reproduction. Mr. Jourdain has referred to the well-known case of the *Raptores* in Scandinavia having exceptionally large clutches of eggs in the years when the food-supply is unusually plentiful, and cites the writings of Professor Collett and Mr. H. J. Pearson in corroboration. Of the facts there cannot be the least doubt, they have been confirmed over and over again, and in the case cited it may well be an instance of direct cause and effect. After my personal experience of a "lemming year" in Norway, I, for one, should be exceedingly reluctant to disbelieve the direct relationship of food-supply and increased fecundity. On the other hand I do not feel at all sure that even in the case above-mentioned we have the *whole* explanation, for regard must be given to the undoubted fact that this increase of reproductive powers in certain years in Scandinavia is not confined solely to the lemmings and the birds that prey upon them, but affects simultaneously many other species. I could quote several instances of this from my own observations, and Professor Collett makes repeated reference to it in his writings; thus in his monograph on the lemming, he gives many instances of this simultaneous increase of fecundity amongst not only other small *Mammalia*, including the hare, but such widely-separated forms as the *Raptores*, the game-birds (Ptarmigan, Willow-Grouse, Blackgame and

Capercaillie), Mealy Redpoll, and Brambling, while not infrequently the birch-woods are devastated at the same time by countless hordes of the *larvæ* of a geometer moth (*Cidaria dilutata*). It has even been recorded on the evidence of native tradition that frogs and herrings are similarly affected in these years of increased fertility.

Whatever influence food-supply may have there seems to be without doubt some other cause, of which we as yet know little or nothing, for this remarkable phenomenon.

N. F. TICEHURST.

#### YELLOW-BROWED WARBLER IN LINCOLNSHIRE.

ON October 12th I shot a Yellow-browed Warbler (*Phylloscopus superciliosus*) at North Cotes. It was a very fine example and proved to be a male. There was very little migration in progress, only a few Thrushes, Rock-Pipits, and Grey Crows coming in. A fresh south wind was blowing and there had been a gale from the same quarter on the previous day.

G. H. CATON HAIGH.

#### EXTRAORDINARY BOLDNESS OF A GRASSHOPPER-WARBLER.

OF all our small birds the Grasshopper-Warbler (*Locustella nevia*) is perhaps the shyest; but a charming little incident, which occurred to me on June 3rd, 1909, shows that in defence of their young they can be curiously bold. I was hidden within the shelter of three reed-thatched hurdles, covered with an old khaki and green cloth, photographing adult Grasshopper-Warblers feeding their young. Previously to commencing operations I removed the oldest of the six young birds to my coat-pocket for security, as he knew all that was necessary for self-preservation, and would have quickly imparted his knowledge to the rest. After an hour or so I placed him in my hat which was on my knee. He climbed to the hat-brim and "cheeped" loudly for food. Soon to my intense astonishment I heard a mouse-like rustling in the reed-screen; the mother, attracted by the voice of the nestling, crept through the shelter with a caterpillar, but suddenly withdrew on finding herself face to face with a horrid human. The young bird complained loudly, while I remained motionless. Soon the mother returned, and this time climbed to the top of the camera and called to the little one, which fluttered up and was fed. I then replaced him within the screen, but a few inches further from my face. It was not long before

the courageous little hen again returned and administered to the youngster another green caterpillar, keeping one eye on me meanwhile. I then put the young bird back into the nest after first fastening a ring on one leg. This business occupied some minutes, during which the mother crept round and round me, now fluttering with apparently broken wing, now creep-



ing in and out of the rough tangle of sedge and grass, all the time uttering a curious cry which resembled that of a weasel.

The male bird, which diligently took his turn in feeding the young, occasionally showed great displeasure at my presence by displaying his tail-feathers as shown in the accompanying photograph.

E. L. TURNER.

#### BLUE-HEADED WAGTAIL IN ESSEX.

ON September 12th, 1909, I saw six Blue-headed Wagtails (*Motacilla flava*) in the neighbourhood of Southminster, Essex. Two of them were adults and four were young birds.

I saw them at close quarters, and one of the old birds showed very clearly the white eye-stripe and blue-grey crown. Whether these were on migration or were bred locally I am unable to say, but as the country in which they were seen was marsh-land close to the sea it is possible that the former supposition is the right one.

J. BEDDALL SMITH.

[This, of course, suggests a family party, and the country is no doubt suitable, but the date of observation is too late to make it a certainty that they were bred locally.—N. F. T.]

#### RED-BREASTED FLYCATCHER IN LINCOLNSHIRE.

ON September 16th I shot an immature male of the Red-breasted Flycatcher (*Muscicapa parva*) from a hedge near the coast at North Cotes. There were not many birds passing at this time, but the hedges contained Redstarts, Pied Flycatchers, and Garden-Warblers, and there were many Wheatears along the sea-beach. This is, I believe, the first occurrence of this species in Lincolnshire.

G. H. CATON HAIGH.

#### LESSER REDPOLL IN ESSEX.

IT may interest Mr. R. Hay Fenton, whose note under this heading appeared in your issue for October (p. 161), to know that the Lesser Redpoll may annually be heard in Epping Forest in May and June, and undoubtedly nests there, though sparingly. The whole of last summer a pair of these birds frequented the cottage gardens behind the Wake Arms Inn, and I have frequently heard the unmistakable trilling of this bird in the Theydon and Epping districts of the forest, though I have never looked for the nest there.

In the neighbourhood of Brentwood and particularly Warley this bird is of annual occurrence in the breeding season, and some years, by no means uncommon, and it seems to be partial to young birch-scrub.

Some further dates of the nesting of the Lesser Redpoll may be of interest:—

Near Shrewsbury, Shropshire; May 24th, 4 eggs, May 17th, 5 eggs, May 29th, 4 eggs, June 6th, 5 eggs, all fresh; June 7th, 5 eggs, incubation advanced; June 1st, 5 large young ones.

D. H. MEARES.

#### THE IRRUPTION OF CROSSBILLS\* (PLATE XIII.).

WITH this number we give a series of maps which has been very kindly prepared for the purpose by Commander Lynes,

\* For previous references to this subject, cf. pp. 82, 123, 162, 190-194.



and we feel sure that these cleverly drawn maps will be much appreciated by our readers in that they give a comprehensive view of the Crossbill irruption in the British Islands in 1909 *so far as the records go*. Commander Lynes wishes to point out that he has drawn up the maps with a view to showing graphically the records as they stand, and that he has kept as closely as has been possible, considering the frequent lack of precise details, to these records.

The irruption of the Crossbills this year has been an important event, and it behoves us to make as complete a record as possible of the movement so far as it affects the British Islands. The wider question of a comprehensive study of the whole great movement is not within our province, and we are delighted to learn that Ritter von Tschusi has undertaken this important work in the same way that he has already investigated the invasion of Pallas's Sand-Grouse.

SCOTLAND.—The only Crossbill I have heard of in this district (Edinburgh) during the present year was seen near Gifford, Haddingtonshire, in August (*William Evans*).

WESTMORLAND.—A flock of about twenty (old and young), three miles north of Windermere, on November 17th; presumably same flock on November 20th; between forty and fifty, two miles further east, on November 20th (*E. B. Dunlop*).

YORKSHIRE.—About forty seen near Whitby on September 10th, one picked up on the 14th, and about the 19th one was shot from a flock of about a dozen frequenting for a few days a garden on the outskirts of the town (*T. Stephenson, Nat., 1909, p. 398*).

SUFFOLK.—An adult male and female and several young at Thurston, near Bury St. Edmunds, on September 27th (*D. H. Meares*). One near Thetford on October 27th, and a small flock (about six) on the Norfolk side of the river near Croxton on October 29th (*H. Noble*).

CHESHIRE.—(Correction to *supra*, p. 191). The locality was Alderley Edge, near, *not at*, Bowdon. A single bird was seen there on July 11th (*cf.* p. 124). No others were seen until October 3rd, when four were observed; eight or nine on October 6th; more plentiful on 9th; on the 15th at least fifty was the estimated number. On October 24th a small party was seen near Chelford, about four miles from Alderley Edge (*T. A. Coward*).

- OXFORDSHIRE.—A flock of fourteen at Shotover, near Oxford, on November 5th (*F. A. Monckton*).
- BUCKS.—A small party (seven or eight) at Chalfont St. Peter on October 31st (*J. Beddall Smith*).
- BERKS.—First flock seen near Henley-on-Thames in second week in August and the last noticed on October 16th (*H. Noble*).
- HAMPSHIRE.—A single bird near Hayling Island on October 29th. Feeding on grass-seeds: flew away westwards (*H. Atkins*). A small party first seen at Laverstoke, Whitchurch, on July 18th, and at intervals parties have been noticed up to the present—November 20th (*P. W. Munn*).
- SURREY.—Fifteen to twenty (old and young) in a fir-tree in Hampton Court Gardens, on October 25th (*R. Godfrey, Field*, 30.x.'09, p. 802). Small flocks frequenting garden at Purley on September 14th (*M. C. Baily, Selborne Mag.*, 1909, p. 205).
- CO. DOWN, IRELAND.—“The Rev. R. H. Coote writes me that a Crossbill, which appeared to be in a much exhausted state, was shot by his gardener, Joseph Law, in the first week of October last, at the Rectory, Donaghadee, co. Down” (*W. H. Workman*).

#### CROSSBILLS IN THE FÆRÖES.

I SEE in your last number that the Rev. Francis Turreff records the Crossbill from the Færöes, but he is in error in supposing that this is the first record of the occurrence of this species in those islands. As long ago as 1862 Herr H. C. Müller (*Færöernes Fuglefauna*) records that in September, 1861, they were numerous, and that he obtained two. I have come across the following records of occurrences subsequent to this date: a pair, July 10th, 1868, a pair, July 15th, 1868, about six seen June 29th, 1882, two, July 9th, 1882, one, July, 1892 (communicated by Herr H. C. Müller to Herr Knud Andersen, *Vidensk. Medd. fra den naturh. Foren. i Kbhvn.*, 1901). “On the whole not uncommon . . . . I have many times shot them . . . . the last time I saw them was in 1894 or 1895” (Herr P. F. Petersen *in litt.* to Herr Knud Andersen, *id.*, 1898). One, winter of 1901-2 (*id.* 1905). Colonel Feilden (*Zool.*, 1872).

All the skins received at the Zoological Museum in Copenhagen from the Færöes are *Loxia curvirostra curvirostra*.

*Loxia bifasciata* has also occurred once—an adult male in 1898 (Knud Andersen, *Vidensk. Medd. fra den naturh. Foren. i Kbhvn.*, 1899).

C. B. TICEHURST.

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PHYSICS 309  
LECTURE NOTES  
BY  
RICHARD P. FEYNMAN

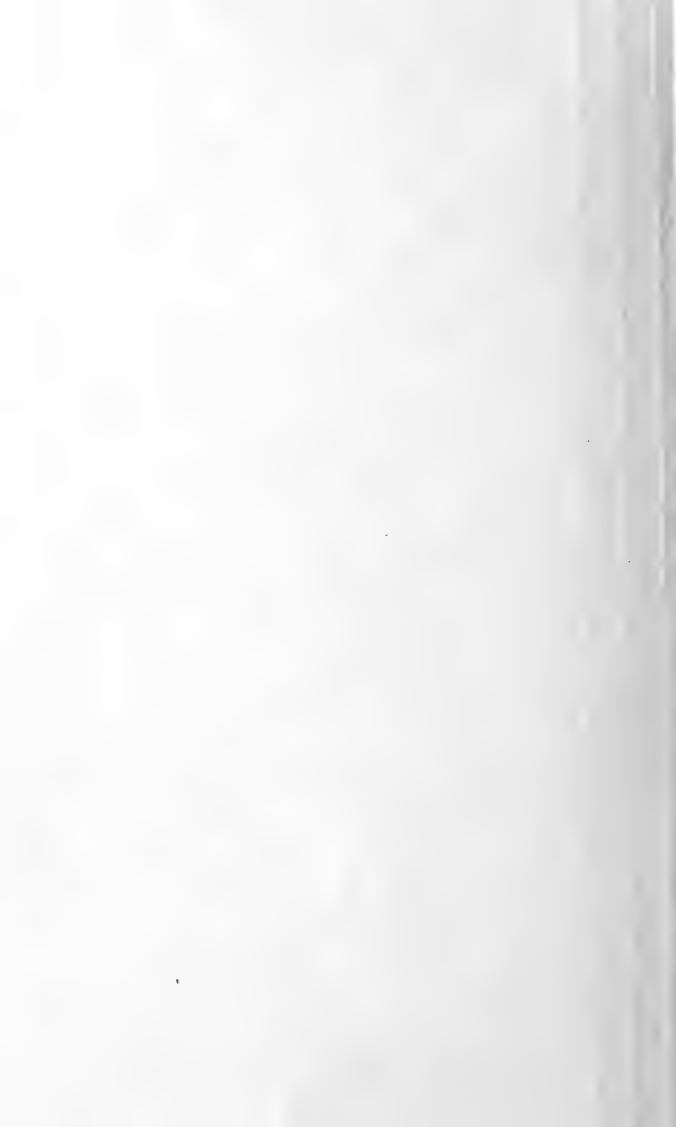
LECTURE 1  
THE SPECIAL THEORY OF RELATIVITY

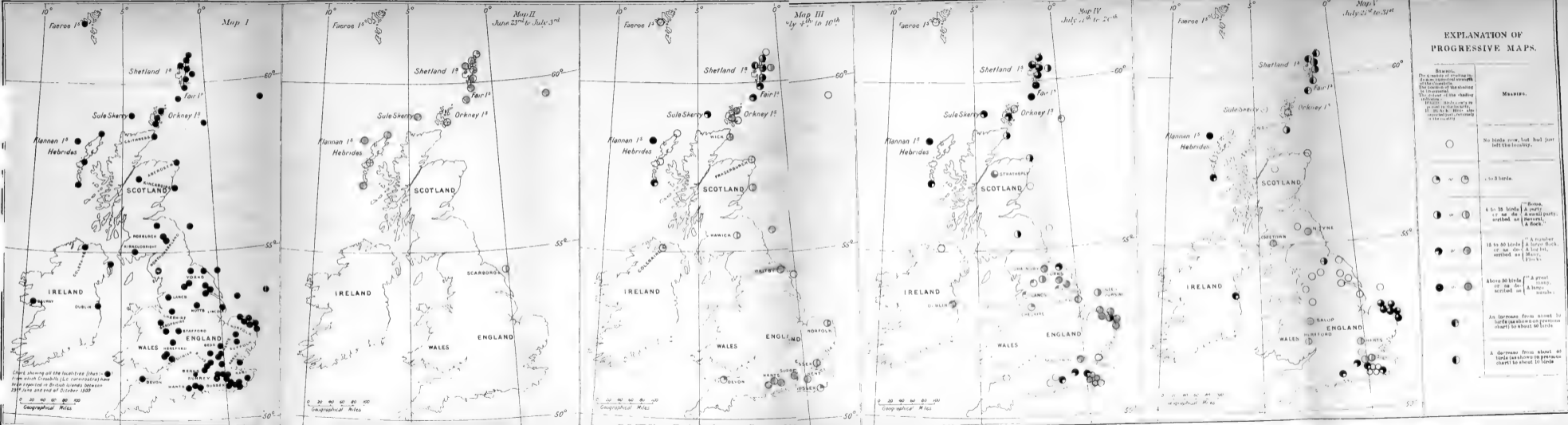
1.1 THE GALILEAN TRANSFORMATION  
1.2 THE MICHELSON-MORLEY EXPERIMENT  
1.3 THE SPECIAL THEORY OF RELATIVITY

1.4 THE VELOCITY ADDITION FORMULA  
1.5 THE RELATIVISTIC DOPLER EFFECT  
1.6 THE RELATIVISTIC TRANSFORMATION OF ENERGY AND MOMENTUM

1.7 THE RELATIVISTIC THEORY OF ELECTRICITY AND MAGNETISM  
1.8 THE RELATIVISTIC THEORY OF GRAVITATION

1.9 THE RELATIVISTIC THEORY OF QUANTUM MECHANICS  
1.10 THE RELATIVISTIC THEORY OF PARTICLES  
1.11 THE RELATIVISTIC THEORY OF FIELDS  
1.12 THE RELATIVISTIC THEORY OF INTERACTIONS  
1.13 THE RELATIVISTIC THEORY OF SCATTERING  
1.14 THE RELATIVISTIC THEORY OF QUANTUM ELECTRODYNAMICS  
1.15 THE RELATIVISTIC THEORY OF QUANTUM CHROMODYNAMICS  
1.16 THE RELATIVISTIC THEORY OF QUANTUM CHROMODYNAMICS  
1.17 THE RELATIVISTIC THEORY OF QUANTUM CHROMODYNAMICS  
1.18 THE RELATIVISTIC THEORY OF QUANTUM CHROMODYNAMICS  
1.19 THE RELATIVISTIC THEORY OF QUANTUM CHROMODYNAMICS  
1.20 THE RELATIVISTIC THEORY OF QUANTUM CHROMODYNAMICS





EXPLANATION OF PROGRESSIVE MAPS.

**LEGEND.**  
The number of circles in the diagrams indicates the number of birds seen. The number of the shaded circles indicates the number of birds seen in the locality. The number of the shaded circles indicates the number of birds seen in the locality.

Symbol	Meaning
○	No birds now, but had just left the locality.
●	1 to 3 birds.
●	4 to 15 birds or as described as "Barns," "Aunt's party," "Pawson," & "Duck."
●	15 to 60 birds or as described as "A number," "A large flock," "A lot of," "Mass," "15-20."
●	Above 60 birds or as described as "A great many," "A large number."
○	An increase from about 10 birds (as shown on previous chart) to about 60 birds.
○	A decrease from about 60 birds (as shown on previous chart) to about 10 birds.

MAPS TO SHOW THE EXTENT AND PROGRESS OF THE IRUPTION OF CROSSBILLS (*Loxia curvirostra curvirostra*) IN THE BRITISH ISLANDS IN THE AUTUMN OF 1909.  
Map I. shows all the localities in which Crossbills have been recorded. Maps II-V. show, as far as the records will allow, the progress of the irruption.  
(Prepared and drawn by Commaider H. Lynes, R.N., M.B.O.U.)



## ROOKS AND JACKDAWS—A QUERY.

MAY I ask if any of the readers of BRITISH BIRDS would kindly supply me with information in reply to any or all of the following questions:—

(1) Between what dates do Rooks and Jackdaws roost at the nesting-trees and the winter sleeping-quarters respectively?

(2) Do the young Rooks (*i.e.*, those with feathered bills) pair and breed?

(3) Do the male and the female Jackdaw share in building the nest?

F. B. KIRKMAN.

## AMERICAN BITTERN IN SUSSEX.

MESSRS. BRAZENOR BROS., the taxidermists, of Lewes Road, Brighton, showed me, on October 26th, an American Bittern (*Botaurus lentiginosus*) in the flesh, which was caught in an exhausted and emaciated condition on the Downs to the north of Brighton on Sunday, October 24th. It lived till the next day. It was in splendid plumage and proved to be a female on dissection; the stomach contained a few small pellets of hair, probably from a mouse or vole.

HERBERT LANGTON.

## GLOSSY IBISES IN YORKSHIRE, NOTTINGHAMSHIRE AND DEVONSHIRE.

AT Hornsea Mere, on the east coast of Yorkshire, I noticed a Glossy Ibis (*Plegadis falcinellus*) on October 15th, 1909, and again on the 16th, on which day I left the place, but my friend Mr. Holmes informs me that the bird disappeared a day or two after I left. I obtained a near view (about twenty-five yards distance) of the bird while it was wading in shallow water among the weeds along the shore of the mere. It appeared rather smaller than a Whimbrel, but much of the same shape, and its colour appeared black or nearly so. I saw a similar bird in the same place in 1902.

ERNEST KEMPSEY.

THREE examples of the Glossy Ibis are reported as having been seen near Hunmanby, between Scarborough and Bridlington, on October 15th, one being afterwards procured, an event which is extremely interesting in view of the fact that, hitherto, according to the information in my possession, there are only five instances of the occurrence of this species on record for the county. The companions of the specimen

taken at Hunmanby are, probably, to be accounted for in the individuals shot near Whitby and Misson, as recorded below.

T. H. NELSON.

A REMARKABLY fine specimen of the Glossy Ibis (*Plegadis falcinellus*) was shot on the Old Hall Farm, Ruswarp, near Whitby, in the North Riding of Yorkshire, on October 20th. The place where it was obtained was a quiet sheltered marshy spot, about a mile from the sea, which it had frequented for some days. It was an adult bird in winter-plumage, the sex unfortunately not being ascertained. The specimen was secured by the Whitby Literary and Philosophical Society, and the skin has been preserved and mounted for the Whitby Museum.

E. HALL.

ABOUT the middle of October a Glossy Ibis was shot at Misson, in Nottinghamshire, by Fred Smith, a wild-fowl shooter, who sold it to a game-dealer at Doncaster for a shilling. Dr. Corbett, of Doncaster, saw it hanging in the shop and purchased it for the Doncaster Museum. This is the first occurrence of this species in the county.

J. WHITAKER.

A Glossy Ibis is reported from near the estuary of the rivers Taw and Torridge in North Devon in the last week of October (*Field*, Nov. 6th, 1909, p. 842.)

#### PINTAIL AND SCAUP-DUCKS IN SURREY.

ON February 8th, 1908, there was an exceptionally large assemblage of wild-duck on Frensham Great Pond, and I had the good fortune to observe a drake Pintail (*Dafla acuta*) associating with a small gathering of Mallard. The Pintail is amongst the rarest of the *Anatidæ* which visit the Surrey waters in winter, records of its occurrence during the past decade being remarkably few.

When again in the neighbourhood on November 28th, 1908, I had under observation two female or immature Scaup-Duck (*Fuligula marila*) and was informed that a party of eight had been noticed on the lake the day previous to my visit. The Scaup, although of more frequent occurrence than the Pintail, can only be regarded as a very irregular visitant to the county.

HOWARD BENTHAM.

#### WOOD-SANDPIPER IN SUSSEX.

JUNE 29th being an early date for the Wood-Sandpiper (*Totanus glareola*) I may mention that I watched two on the



Crumbles, Eastbourne, on that day and the following. I got quite close to them, near enough to see the bronze gleam on their backs. The white rump when they flew was far less conspicuous than it is in the Green Sandpiper.

E. C. ARNOLD.

### BLACK TERNS IN NORTH WALES.

As the records of the Black Tern (*Hydrochelidon nigra*) in North Wales seem to be few, it may be worth noting that on June 1st, 1909, when passing the South Stack, Holy Isle, I saw a bird of this species amongst a flock of either Common or Arctic Terns.

C. B. TICEHURST.

MR. H. E. FORREST mentions (*supra*, p. 168) that the Black Tern (*Hydrochelidon nigra*) was seen in Anglesey in May this year. On September 8th I saw a Black Tern off the point at Bull Bay, North Anglesey. I believe the bird has been seen many times in the spring and autumn on the Anglesey lakes, but I have never seen one off the coast before. After losing sight of this bird I watched carefully for others, but failed to see any. I was quite close to the Tern when it passed, and had a good pair of glasses with me.

C. KINGSLEY SIDDALL.

### PUFFINS IN SURREY.

A PUFFIN (*Fratercula arctica*) settled in our garden on the south side of Banstead Parish, Surrey, on November 1st, 1909, and as it was unable to rise, I caught it without difficulty. It is now in the Diving Birds' House at the Zoological Gardens.

CLEMENCE M. ACLAND.

[In the "Field" (November 6th, 1909, p. 842) Mr. W. F. Noakes reports that his dog retrieved from a field on October 29th, near Croydon, a Puffin, which had evidently been just recently shot, and which died in Mr. Noakes' hand. Puffins have been rarely recorded from Surrey, and it is strange that two should be found so near together and within a few days of each other.—EDS.]

### MANX SHEARWATER IN BERKSHIRE.

A YOUNG female Manx Shearwater (*Puffinus anglorum*) in good condition, was shot near Sindlesham on September 8th, 1909.

HEATLEY NOBLE.

SCOTTISH ORNITHOLOGY FOR 1908.—Mr. John Paterson gives in the "Annals of Scot. Nat. Hist." (pp. 193-214) his

useful yearly Report on this subject. The spring-migration presented unusual features owing to the extraordinary weather which ended in the great snowstorm in England in April. The result to Scotland, where the weather appears to have been normal, was that for three weeks the stream of migration was arrested, while a remarkable inrush of overdue migrants took place in the last days of April and the first days of May; furthermore, a number of summer visitors were noted as being scarce. Only ten *Willow-Wrens* were reported at all for April, but they were generally reported from May 1st to 3rd. *Sedge-Warblers* and *Spotted Flycatchers*, but especially the former, were reported from several districts as very scarce. Only two *Swallows* were reported before April 26th, while the arrival of the *Sand-Martin* was chiefly observed from April 27th to May 7th.

The autumn was remarkable for very large rushes of *Redwings* during October and great movements of *Goldcrests* from October 17th to 21st (*cf. antea*, Vol. II., pp. 232-3).

The following interesting facts may be quoted from the Report:—At Beith a *Blackbird* reared two broods in the same nest; at Scotsraig a *Robin* constantly fed a young *Blackbird* just fledged; a *Turtle-Dove* appeared at the Flannan Islands on October 3rd; an Eared Grebe (*Podiceps nigricollis*) was got at Helensburgh in January.

MARSH - WARBLERS' NESTS WITH CUCKOOS' EGGS IN BUCKINGHAMSHIRE.—Mr. Graham W. Kerr records (*Zool.*, 1909, p. 397) that he found a nest of *Acrocephalus palustris* on June 14th in a very dense nettle-bed, twelve yards from the river near Magna Charta Island, in the parish of Wraysbury. The nest contained two well-marked eggs of the Marsh-Warbler and one of a Cuckoo. On June 30th Mr. E. Pettitt, of Wraysbury, found another nest in the same nettle-bed. This contained four eggs of the Marsh-Warbler and one of the Cuckoo, the latter being of a different type to that found in the first nest (*cf. supra*, p. 185).

RUFF IN IRELAND.—A Reeve (*Machetes pugnax*) was shot on August 30th near Daleybann Lough, Bellacorick, co. Mayo (Robert Warren, *Zool.*, 1909, p. 399), and a Ruff was shot on September 23rd at Inch, co. Donegal (D. C. Campbell, *Irish Nat.*, 1909, p. 243).

SPOONBILL IN DEVON.—A specimen of *Platalea leucorodia* is reported (*Field*, Nov. 6, 1909, p. 842) to have been shot near the estuary of the Taw and Torridge, North Devon, in the last week of October.



# WOOD-PIGEON ENQUIRY No. 3 (1909-10).

You are urgently requested to keep notes during the winter of the points detailed below, and to fill in and forward the Schedule to the Editors of *British Birds* at 326, High Holborn, London, not later than March 31st, 1910. The result of the enquiry will be announced in a future number of *British Birds*, when all the observations have been collated and compared.

*Observer's Name and Address*.....

*District (state County) in which observations were made*.....

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2. When did the flocks arrive ?
3. When did they depart ?
4. Has the food supply been  
scarce or plentiful, and of  
what has it consisted ?

1. Have you noticed either disease, and at what time of year?

2. What percentage of individuals has been affected?

3. Has the food supply been plentiful or scarce, and of what has it consisted at the time when the disease was noticed?

4. Have you any observations relating to the course and length of either disease?

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THE death of Dr. R. BOWDLER SHARPE, which took place at his residence in Barrowgate Road, Chiswick, on Christmas Day, after a brief illness, will be deeply deplored by all ornithologists, not only in this country but in every country where our science is studied—for his fame as an ornithologist was world-wide. Those of us who knew Dr. Sharpe personally will keenly feel the loss of one so genial and so kind. In the next issue we hope to publish a memoir and a portrait.

## RAVENS AT THE NEST, WITH SOME NOTES ON THE HOODED CROW.

BY

FRANCIS HEATHERLEY, F.R.C.S.

WHILST engaged from April 7th to May 1st, 1909, in trying to get photographs of Ravens at the nest, I had, owing to their extreme reluctance to face the camera, abundant opportunities to watch their habits.

I shall not particularise the locality of the very accessible nesting site beyond saying that it was in Northumberland, and, accompanied by Messrs. E. Selous and H. Earl, I arrived on the spot on April 7th. We found that two chicks had been hatched out of four eggs on March 20th, and that on April 4th some men had tried to steal the young. They so broke up the nest with a long pole that the young birds fell out during the night. The shepherd on finding them next morning made a nest for them on an old nesting site lower down. There was plenty of material at hand, as the foot of the cliff is littered, in places six inches deep, with dead heather-stems. That the birds treated it as their natural nest is, I think, shown by the fact that the mother Raven carried away excrement after feeding the young, and that the young themselves generally backed to its edge to defæcate.

In estimating the value of these notes it must be remembered that photography being the primary object there was necessarily a good deal of disturbance owing to the erection of the camera twelve feet from the nest, worked from a hiding tent thirty yards off.

Compared with some Hooded Crows, which I had been photographing under similar conditions, the Ravens proved much more timid birds. The Hoodies, after Earl had left me in the hiding tent, stalked him all over the moor. So long as he lingered within half-a-mile or so of the nest the male followed him about, occasionally



RAVEN FEEDING YOUNG.



RAVEN AFTER HAVING FED YOUNG.

flying back and apparently reporting to the female, which sat on a crag commanding a view of the nesting site, and they did not return to the nest until my companion had gone away in earnest. But once he had cleared off they returned and fed the young freely, although the disguised camera was only ten feet and the tent about forty feet from the nest. The male several times investigated the camera, showing great annoyance, and, flying to the hiding tent, walked round it croaking angrily.

The Ravens did not require Earl to go so far away before they would come back to the nesting site, but once there their behaviour was quite different from that of the Hooded Crows. Each step in our procedure—the erection of the hiding tent, the dummy camera, and the real camera—resulted in such scares that, had the young been of a less hardy race or newly hatched, I think they would have starved.

The female proved bolder than the male, but on the first occasion the young were not fed for twenty-four hours, and on the others they had to scramble out of the nest to be fed, and it was only on such an occasion when the young were squatting in the grass at the foot of the cliff that the male joined in feeding them.

The bird we took to be the female\* was, as in the case of the Hooded Crow, not only more assiduous in feeding, but also, unlike the male, attended to the cleanliness of the nest. But she carried the excrement away in her bill, not pouching it as did the Hooded Crow. Both species are extremely clean in their habits, the nest being scrupulously clean and the young free from vermin.

The Hoodies fed their young much more frequently, sometimes every two or three minutes, with hardly ever a longer interval than twenty minutes, but they had four young. The Raven, even when apparently at her ease,

\* The hen Raven is easily distinguishable at the nest by her note, which is not nearly so deep as that of the cock.—F.C.R.J.

fed the young hurriedly five or six times in rapid succession, until they no longer "shouted" for more, and then left the nesting site, returning about once an hour to have a look at them, but not feeding them or going on to the nest unless they "shouted," they apparently not requiring more food for three or four hours.

The Hoodies were fed entirely by regurgitation. I was never able to see food passing, and, on dissection, their crops contained nothing but the opercula of a few winkles and remains of beetles; probably their main diet was gulls' eggs.

In the case of the Ravens it was, except quite at the beginning, easy to see what the young were fed on, as the mother did not put her head quite so far into the youngsters' gapes, and the morsel was often visible in her beak. Except once, when something like carrion-fat was given, it was invariably the cotyledons of the foetal membranes of sheep. As lambing was going on from the time they were hatched until after they left the nest there was a superabundance of food. The shepherds seemed to bear them no ill will, saying they only attacked dead or dying lambs and sheep. The male did nearly all the foraging, his range extending quite three miles, to my knowledge. In the intervals between feeding, the old birds spent most of their time watching the nest from the opposite side of the valley, about two to three hundred yards away. There were two or three favourite positions towards the top of the fell where, when looking out of the tent, I could be nearly sure to see the female watching. The male brought food and transferred it to her there. When not thus engaged he would be standing watching, often some distance from her.

Once when they were together I noticed both birds standing face to face with the tips of their beaks touching. They stood motionless in this position for three or four minutes. On another occasion the male facing the female jumped up into the air two or three





HOODED CROW. FEMALE FEEDING YOUNG.

times to the height of three or four feet, and another time the female when alone did the same kind of dance.

When engaged in feeding the young, I at first thought that she flew to the male each time for a fresh supply, but came to the conclusion, later on, that she kept a store of food just round the corner of the cliff. The



HOODED CROW. YOUNG BIRDS QUIET.

shepherds told us that when feeding off dead sheep, Ravens hide away stores of meat which the collies afterwards often nose out.

I have often wondered why the Raven nests so early; and although I do not know if the season would hold

good for the deer that no doubt occupied the land in prehistoric times, I do not doubt that at present the hatching of the young during the lambing season is more than a coincidence.

The shepherds told us that soon after the young are hatched the old cease to cover them, and Selous, who



HOODED CROW. FEMALE PEERING ROUND AFTER FEEDING.

once watched them during the night, and on another occasion from before the dawn, said that the old birds roosted away from the nest. The large quantity of sheep's wool with which the nest is lined, as in the Hoodies' case, no doubt keeps the young warm.

The young on the first few occasions that we visited the nest flattened themselves down, and each with its head on one side looked up with wide open grey eye. Later they sat and stared at us unconcernedly or at times uneasily. They grew very rapidly, their beaks, at first flesh-colour, became black at the base, and the patch spread down to meet a similar patch from the tip of the beak, and strong bristles developed. They gradually spent more and more time in preening and less in sleep. They seemed very hardy and took no notice of either rain, hail or snow. One of the young was larger and considerably more advanced than the other, and its voice deeper pitched, so as to make me think that they were male and female. The Raven language, like the Hoodies', is far simpler than the Rook's. When annoyed they uttered short, sharp, high-pitched barks. When all was well the note was low and almost musical; there were generally three notes in a series. Towards the end of their time on the nest each after preening would back to the edge of the nest and then flap its wings vigorously for a minute or two at a time.

The shepherds told us that the young generally leave the nest from May 1st to May 12th, according to the number of the brood, and that ours would probably fly on the former date. They said six was the largest brood they remembered.

Our young would probably have flown before May 1st, but for the fact that we had to take the precaution of clipping their wings, for one, having been frightened off the nest by Earl on April 26th, took us three hours to recover. Nevertheless both took their flight on May 1st escorted by their excited parents, which they nearly equalled in size, only two of the central tail-feathers of the young showing quill at this date.

## SEQUENCE OF PLUMAGES IN BRITISH BIRDS.

II.—THE MISTLE-THRUSH, SONG-THRUSH, REDWING  
AND FIELDFARE.\*

BY

C. B. TICEHURST, M.A., B.C., M.R.C.S., M.B.O.U.

MISTLE-THRUSH. *Turdus viscivorus*, L.

MALE and FEMALE.

**DOWN-PLUMAGE.** Greyish-white, some pre-pennæ having buffish-white tips. *Distribution*—Inner and outer supra-orbital, occipital, humeral, spinal, and ulnar. In some there is a pre-penna on the bastard-wing (*cf.* Vol. II., p. 188).

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

Whole *head*, *hind-neck* and *mantle* greyish-brown to buffish-brown, each feather having a brown-black edging, and a whitish cream-coloured centre (larger and more wedge-shaped on the mantle, more elongated on the scapulars); *rump* greyish-buff to ochreous-buff, with less distinct pale centres to the feathers and indistinct dark tips; *upper tail-coverts* greyish-brown with pale centres and margins; *lores* and indistinct *post-orbital streak* buffish-white or cream; *ear-coverts* buffish with black terminal markings; *cheeks* whitish tipped with brown-black; *moustachial stripes* whitish with well marked brown-black tips; *chin* and *upper-throat* dull white; *lower-throat* and *breast* buffish-white with dark terminal markings, rounder and smaller on the breast than in the First Winter-Plumage, triangular on the breast; *belly* and *flanks* dull white or buffish-white with narrow dark tips to some of the feathers; *under tail-coverts* buffish-white with the basal brown markings not so well defined as in First Winter-Plumage or almost absent; *tail* greyish-brown, lighter than the primaries, with indistinct barring, the outer pair paler on the outer web with tips and terminal inch of inner webs grey-white, the next two pairs tipped and edged with grey-white on the inner webs; *primaries* and *secondaries* very dark brown, the innermost primaries and all the secondaries edged and washed with pale golden-buff to creamy buff, becoming ochreous on the inner two or three secondaries; *primary-coverts* very dark brown washed on the outer webs with golden-buff; *greater coverts* very dark brown with a faint wash of golden-brown on the edges of the outer webs, and a mesial terminal streak of ochreous to the inner three or four and ochreous tips to all; *median* and *lesser coverts* brown with a mesial streak of ochreous becoming broad at the tip; *axillaries* and *under wing-coverts* white.

N.B.—There is some individual variation in the intensity of the coloration of the upper and under-parts and in the size of the markings,

\* The descriptions of the plumages are taken from birds which have just assumed that plumage or, if the plumage be acquired without a moult, then from birds which are about to, or have just begun to nest.

and in the number of the greater coverts which have the mesial streak. Before this plumage is moulted, the upper-parts become, by fading and abrasion, greyer and the mesial markings dirty grey; the lores, post-orbital streak and under-parts lose most of the buffish tint and become dull white, the ochreous edgings to the outer webs of the inner two or three secondaries and the ochreous markings on the coverts become greyish-white.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the rectrices, remiges, primary-coverts and outer four or five of the greater coverts.

Whole *head, hind-neck* and *mantle* greyish-brown; *rump* greyish-brown, edged with ochreous; *upper tail-coverts* greyish-brown with paler tips and quills; *lores*, feathers behind the eyes and lower lids greyish-white; *ear-coverts* buffish-white tipped and edged with sepia; *cheeks* dull buffish-white tipped with brownish-black; *chin* and *upper-throat* greyish-white, the latter sparsely streaked with small spear-shaped dark markings; *lower-throat, breast* and *belly* pale golden-buff with very dark brown or brown-black terminal markings, triangular on the lower throat, rounder on the breast, and terminal bars on belly, (the centre of the belly has smaller and fewer markings); *flanks* richer in colour with the same markings as the belly but larger; *under tail-coverts* buffish-white with broad brownish edges to the bases of the feathers; *tail* as in the Juvenile Plumage, but slightly more worn; *primaries, secondaries, primary-coverts* as in the Juvenile Plumage, but the golden-buff on the outer webs is less conspicuous and paler through wear, and the ochreous on the two innermost secondaries grey-white; *greater coverts* outer four or five as in the Juvenile Plumage, but the tips worn and the edges of the outer webs whitish-grey, the inner ones fresh and grey-brown with grey-white tips and faint whitish edges to the outer webs; *median coverts* greyish-brown tipped with greyish-white; *lesser coverts* greyish-brown.

N.B.—There is some variation in the amount of ochreous on the rump, in the purity and amount of the whitish colour in the tail, and in the size of the markings of the under-parts, as well as in the number of greater coverts which are renewed.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion and fading.

*Upper-parts* rather paler, especially the *rump*, which loses some of its ochreous tint, some of the pale edges on the *upper tail-coverts* are worn off. On the *under-parts* much of the golden-buff tint is lost and the dark markings become rather browner and more sharply defined; tips and edges of the *greater coverts* and tips of the *median coverts* nearly worn off; the edging and wash of golden-buff on the *primaries, secondaries* and *primary-coverts* have now entirely disappeared, and the greyish-white on the inner two secondaries has gone.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

Only to be distinguished from the First Winter-Plumage by the paler *under-parts*, there being less golden-buff colouring, and in freshly moulted birds by *all the greater coverts* being fresh and not worn, while in many individuals in First Winter-Plumage the mesial streak is present on some of the greater coverts.

**ADULT SUMMER-PLUMAGE.** Acquired by the same processes as the First Summer-Plumage, and as a rule is indistinguishable from it.

### BRITISH SONG-THRUSH.

*Turdus musicus clarkei*, Hartert.

#### MALE and FEMALE.

**DOWN - PLUMAGE.** Buffish-white. *Distribution* — Inner supra-orbital, occipital, humeral, spinal and ulnar (*cf.* Vol. II., p. 188).

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

Whole *head, hind-neck, mantle* and *scapulars* clove-brown, each feather with a darker tip and a mesial ochreous streak, small and faint on the head and neck, larger and more distinct on the mantle and largest on the scapulars (where in some it forms an elongated streak or oval spot); *rump* rather paler and more ochreous; *upper tail-coverts* clove-brown washed with ochreous; *superciliary* (ending in a *post-orbital streak*) buffish-white or ochreous-buff; *ear-coverts* and *cheeks* golden-buff, the feathers faintly tipped with brown-black; *moustachial stripes* are formed by creamy-buff feathers with well marked brown-black tips; *chin* and *throat* dull white or buffish-white, tipped at the sides and lower part with brown-black; *breast* and *flanks* pale golden-buff, each feather tipped with roundish brown-black spots; *belly* dull white sparsely splashed with pale golden-buff and with a variable amount of small brown-black markings; *under tail-coverts* very pale golden-buff; *tail* clove-brown; *primaries* and *secondaries* dark brown washed with golden-brown on the outer webs except towards the tips, and the two innermost secondaries faintly tipped with pale ochreous, inner margins of the underside of the remiges pale buff; *primary-coverts* golden-brown with conspicuous brown-black ends forming a "wing-spot"; *greater coverts* dark brown washed with golden-brown on the outer webs and with golden-buff tips forming a wing-bar (the inner four or five feathers usually having also mesial terminal streaks of the same colour); *median* and *lesser coverts* golden-brown with a mesial streak of golden-buff or ochreous ending in a broad tip to each feather; *axillaries* and *under wing-coverts* golden-buff.

N.B.—The intensity of the golden-buff coloration, the size of the ochreous markings, and the number of feathers in the great coverts having mesial streaks, vary in different individuals.

By the time the moult into the next plumage has started, the ochreous and golden-buff colours of the superciliary, back, breast and wing-coverts in many specimens become paler by wear and fading.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the rectrices, remiges, primary- and a variable number of the greater wing-coverts (usually all except the innermost three or four).

Whole *head, hind-neck, mantle* and *scapulars* clove-brown; *rump*

and *upper tail-coverts* olive-brown; *lores* and indistinct narrow *superciliary* dirty pale buff; *ear-coverts* golden-buff more heavily tipped and edged with dark brown than in the Juvenile Plumage; *moustachial stripes* formed by pale buff feathers with triangular terminal markings of brownish-black; *checks* pale golden-buff tipped with small brown-black spots; *chin* cream; *upper-throat* pale buff with variable amount of very dark brown triangular spotting; *lower-throat* and *upper-breast* pale golden-buff heavily marked with very dark brown fan-shaped terminal spots; *lower-breast* and *belly* dull white sparsely spotted with smaller roundish or pear-shaped, very dark brown markings; *flank* feathers with a buffish base and larger, less distinct and rather paler brown, oval or pear-shaped spots (the edges of the feathers give the whole a slightly olivaceous-buff tinge); *under tail-coverts* white with broad brown or buffish-brown edgings to the basal three-quarters of the feathers; *tail, primaries* and *secondaries* and the (unmoulted) outer half of the *greater coverts* as in the Juvenile Plumage (but slightly worn), the inner (new) half clove-brown, the outer webs washed with golden-brown and with small pale tips; *median coverts* clove-brown, with ochreous or golden-buff triangular tips; *lesser coverts* clove-brown.

N.B.—As the season advances the golden-brown tinge on the wings and the ochreous tips to the inner two secondaries and the golden-buff tips to the greater coverts become partly worn off.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion and fading of the feathers.

The whole of the *upper-surface*, except the head, has a slightly greyer tint, and the golden-buff of the *under-parts* becomes paler and the spots more sharply defined and rather paler brown; the golden-brown tinge on the *wings* and the golden-buff tips to the *median* and *greater coverts*, and the tips of the inner two *secondaries* become paler and almost obsolete.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult and cannot always be distinguished from the First Winter-Plumage, except where in some examples in First Winter-Plumage there are some unmoulted *greater coverts* with mesial streaks.

**ADULT SUMMER-PLUMAGE.** Acquired in the same manner as the First Summer-Plumage and usually cannot be distinguished from it.

### REDWING. *Turdus iliacus*, L.

#### MALE and FEMALE.

**DOWN-PLUMAGE.** Pale buffish white. *Distribution*—Inner supra-orbital, occipital, humeral, spinal, ulnar.

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

Whole *head* and *hind-neck* clove-brown; *mantle* and *scapulars* brown with an ochreous tint, the feathers having dark tips and cream-



coloured mesial streaks which are longer and more pronounced on the scapulars; *rump* and *upper tail-coverts* greyish-brown with an ochreous tint; line from base of bill passing into the *superciliary* and *post-orbital streaks* creamy-buff surmounted by rather darker feathers than the rest of the head; *lores* and *ear-coverts* dark brown; *cheeks* buffish-white streaked with brownish-black; *moustachial streaks* brownish-black; *chin* and *upper-throat* buffish-white; *lower-throat* and *upper-breast* pale golden-buff heavily spotted with brownish-black at the tips; *lower-breast*, *belly* and *flanks* whitish with terminal blackish markings to the feathers, the markings being smaller and not so profuse as on the upper-breast (some of the flank-feathers are of a deeper golden-buff); *under tail-coverts* whitish-buff with dark brown tips; *tail* clove-brown with an olivaceous tint to the outer webs; *primaries* and *secondaries* dark brown, paler on the edges of the outer webs, the two innermost secondaries with whitish tips; *primary-coverts* dark brown paler on the outer webs except at the tips; *greater coverts* dark brown, the outer webs with a buffish-brown tint and tips of pale golden-buff, and on a variable number (usually the inner half) a faintish mesial terminal streak of the same colour; *median coverts* dark brown with narrow mesial streaks of a pale golden-buff broadening at the tips; *lesser coverts* dark brown with narrow mesial streaks of pale golden-buff; *under wing-coverts* pale orange-buff.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the rectrices, remiges, primary-coverts, and some of the greater coverts (usually the three or four innermost only are moulted).

Whole of the *head*, *hind-neck*, *mantle* and *scapulars* clove-brown, the feathers of the head having darker centres; *rump* and *upper tail-coverts* olivaceous-brown; line passing from base of bill into the *superciliary* and the *post-orbital streaks* whitish, sprinkled with buff especially anteriorly (this line is much better defined than in the Juvenile Plumage); *lores* very dark brown; *ear-coverts* dark brown, some of the feathers having pale buffish-white centres; *cheeks* and sides of *neck* pale buffish-white or golden-buff sparsely tipped with dark brown; *chin* dull white or buffish-white; the whole *throat* buffish-white, the feathers with mesial longitudinal streaks and tips of dark brown (the streaks being few or absent in the centre but well marked at the sides of the throat); *breast* pale buffish-white or dull white, the feathers with large central markings and tips of olivaceous-brown, which often almost replace the lighter colour especially at the sides; *belly* dull white; *flanks* rich rust-red, the inner portion heavily streaked with olive, which markings in some reach to the belly; *under tail-coverts* white with olive-brown bases; *rectrices*, *remiges* and *primary-coverts* as in the Juvenile Plumage (but slightly worn); *greater coverts*, the innermost three or four (which are new feathers) dark brown, the outer webs with a buffish-brown tinge, and edges of rust or golden-buff, the rest of the greater coverts as in the Juvenile Plumage, but the tips slightly worn; *median coverts* clove-brown but the tips of the feathers paler, yellowish or rusty; *lesser coverts* clove-brown; *axillaries* and *under wing-coverts* paler rusty-red than the flanks.

N.B. There is some variation in the general colour of the underparts and in the size and number of the dark markings, and in the number of greater coverts which are renewed.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion and fading.

The whole of the *head* darker, due to the dark centres being brought into prominence; *upper-parts* and *tail* rather greyer in tint; *superciliary stripes* white; the *under-parts* dull white, all the buffish tints having disappeared, the dark markings rather browner, bolder and more prominent, and the sides of the breast much more olivaceous; the outer webs of the *remiges* greyish-brown in tint; the whitish tips to the innermost *secondaries* almost or entirely worn off and those on the *greater coverts* smaller and whiter, or almost disappeared.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

Resembles the First Winter-Plumage, but can generally be distinguished by the absence of the whitish tips to the two innermost *secondaries*, while there are no pale golden-buff tips or mesial streaks to any of the *greater coverts*.

**ADULT SUMMER-PLUMAGE.** Acquired in the same manner as the First Summer-Plumage.

Resembles the First Summer-Plumage, but there are no whitish tips to the two innermost *secondaries* and no pale tips or mesial streaks to any of the *greater coverts*. (Some birds in First Summer-Plumage have lost these markings and cannot be distinguished with certainty from birds in Adult Summer-Plumage.)

## FIELDFARE. *Turdus pilaris*, L.

MALE and FEMALE.

**DOWN-PLUMAGE.** Not examined.

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

Whole *head* and *hind-neck* greyish-brown, with a whitish shaft to each feather; *mantle* and *scapulars* brown with mesial longitudinal streaks of varying dimensions of dull white or yellowish-buff, and dark terminal bars; *rump* smoky-grey with indistinct edgings and mesial streaks of a paler colour; *upper tail-coverts* dark smoke-grey with pale edgings and tips to the feathers; line from the base of the bill and indistinct *superciliary stripes* dirty pale buff; *chin* and *upper-throat* pale buff; *lower-throat* and *breast* pale buff tipped with roundish black spots; *belly* and *flanks* greyish-white, the feathers tipped with blackish; *under tail-coverts* dull white or buffish-white edged at the bases of the feathers with dark-brown; *tail* blackish, the central pair having indistinct barring and the tips of the two outer pairs being greyish on the inner webs; *primaries* and *secondaries* very dark brown, the edges of the outer webs paler, the secondaries having also a chestnut tinge and the two innermost with pale tips; *greater coverts* dark brown with a faint wash of pale chestnut on most of the inner ones which also have terminal whitish shaft-lines, and all have whitish tips; *median* and *lesser coverts* brown with pale ochreous-buff or dull

white shaft-lines, ending in tips of the same colour; *axillaries* and *under wing-coverts* white, underside of *remiges* greyish.

N.B.—There is some individual variation in the intensity of the yellowish-buff colouring and in the size of the markings of the upper- and under-parts and in the number of the feathers with pale shaft-lines in the greater coverts.

Just before this plumage is moulted the contour-feathers are much abraded and much of the yellowish-buff colouring has changed to greyish-white.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the rectrices, remiges, primary-coverts, and a variable number of the greater coverts (usually the outer half are retained).

Whole *head* and *hind-neck* dark smoke-grey, the feathers of the head having blackish centres; *mantle* and *scapulars* chestnut-brown sometimes faintly tipped with yellowish-grey; *rump* and *upper tail-coverts* ash-grey, many specimens having a faint ochreous tint, especially on the latter; line from base of bill and *superciliary* indistinct and pale grey or creamy-buff; *lores* blackish; *ear-coverts* dark smoke-grey; *cheeks* pale buff streaked with very dark brown; *chin* pale buff; *upper-throat*, the feathers with dark centres and buff edges and tips; *lower-throat* warm buff with brownish-black central streaks of varying shape running to the tips; *upper-breast* warm buff with brown-black markings of very varying shape; *lower-breast* buffish-white; *belly* dull white with variable amount of dark brown markings hidden by broad edgings; *sides of breast* and *flanks* dark brown to brown-black, the feathers with broad edges and tips—whitish on the flanks, buffish on the breast, making the dark-coloured parts of the feathers inconspicuous; *under tail-coverts* white with blackish-grey bases which extend up the margins of the feathers for a variable distance (as in the flanks these dark markings are hidden); *primaries*, *secondaries* and *primary-coverts* as in the Juvenile, but the edges of the outer webs slightly paler through wear; *greater coverts*, the outer ones as in the Juvenile Plumage but the tips slightly worn, the inner four or five grey-brown washed with chestnut on the outer webs; *median coverts* dark brown with pale tips; *lesser coverts* rather paler chestnut than the mantle and with pale tips and edges; *axillaries* and *under wing-coverts* white.

N.B. There is some variation in the number of greater coverts of the Juvenile Plumage retained, and a great variation in the shape of the dark markings on the under-parts.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion and fading.

Whole *head* darker, the blackish centres being more conspicuous and edged with ashy-grey, giving the whole a mottled appearance; *hind-neck* ashy-grey; *mantle* and *scapulars* rather paler; *rump* and *upper tail-coverts* pure ashy-grey with no ochreous tinge; on the *under-parts* the buff tinge is paler and the dark brown spots, streaks, and U-shaped markings now stand out boldly, especially on the sides of the *breast* and *flanks* where they were in the First Winter-Plumage obscured by broad edgings and tips; the chestnut tinge on the *wings*

is rather paler than in winter, and much of the pale edging and tips on the coverts and two innermost secondaries is lost.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

Resembles the First Winter-Plumage, but may be distinguished by having the *mantle* and *scapulars* of a deeper chestnut and in some, at any rate, the centres of the feathers of the *mantle* are very dark (almost black); by having on the inner webs of the *secondaries* and *greater coverts* and the *median coverts* a greater amount of chestnut tinge; by the *greater coverts* lacking the whitish tips and having no pale shaft-lines.

**ADULT SUMMER-PLUMAGE.** Acquired in the same manner as the First Summer-Plumage.

Resembles the First Summer-Plumage and can only be distinguished by the greater amount of chestnut tinge on the inner webs of the *secondaries*, *greater* and *median coverts*, and by the *mantle* and *scapulars* being of a rather deeper tint.



# NOTES

## RECOVERY OF MARKED BIRDS.

LAPWING (*Vanellus vulgaris*).—B. B., No. 2282, marked by Mr. J. Bartholomew at Glenorchard, Stirlingshire, Scotland, on June 17th, 1909, as a nestling. Recovered (shot) in the Commune of Aranjuzon, Canton of Navarreux (about twenty miles west of Pau), Basses Pyrénées, France, on November 17th, 1909.

This bird was very kindly reported with full particulars by M. J. Béquerie of Oloron.

WOODCOCK (*Scolopax rusticola*).—B. B., No. 524, marked by Major H. Trevelyan at Castle Caldwell, co. Fermanagh, Ireland, on July 12th, 1909, as a nestling. Recovered (shot) near Belleek, co. Fermanagh, on November 27th, 1909.

This bird was very kindly reported by Mr. J. Sweeny, who shot it. Mr. Sweeny remarks that it was in good condition and weighed over one pound. It appears to have stayed very near the place it was hatched.

BLACK-HEADED GULLS (*Larus ridibundus*).—B. B., No. 3649, marked by Mr. H. Gladstone at Penpont, Dumfriesshire, on July 12th, 1909, as a young bird. Recovered at Carluke, Lanarkshire, on November 27th, 1909.

This bird was very kindly reported by Mr. G. D. Fordyce, who stated that it was one of a "number" feeding in a field.

B. B., No. 3210, marked as a nestling by Dr. C. B. Ticehurst near Bala, Merionethshire, Wales, on June 12th, 1909. Recovered at Malton, north Yorkshire, on December 5th, 1909.

The information regarding this Gull was sent by Mr. Donald Walker to the editor of the "Field," who very kindly forwarded the letter. Mr. Walker remarks that the bird was picked up in a wounded state.

TEAL (*Nettion crecca*).—Mortensen, No. 1030Y, marked by Herr H. C. C. Mortensen on October 19th, 1909, in a duck-decoy (where this bird was caught and liberated) in the Isle of Fanoe, south Denmark. Recovered (shot) on Hayling Island, Hants, on November 24th, 1909.

This bird was kindly reported by Mr. Howard Atkins, who states that nine other Teal without rings were procured at the same time.

Mortensen, No. 117, marked in the same place and manner as above on September 1st, 1909. Recovered (shot) on November 25th, 1909, in the Moray Firth, three miles from Inverness, Scotland.

This Teal was kindly reported by Mr. R. H. W. Leach, who saw it in the flesh.

Mortensen, No. 1040K, marked by Herr H. C. C. Mortensen on October 19th, 1909, as No. 1030Y above. Recovered (caught) in Sir Savile Crossley's duck-decoy, at Somerleyton Hall, Lowestoft, Suffolk, on December 5th, 1909.

This Teal was reported by Sir Savile Crossley to the editor of the "Field," who very kindly forwarded the letter to me.

Herr H. C. C. Mortensen began marking birds with metal rings in Denmark in 1899. In October, 1907,\* he marked 102 Teal caught in the decoys on the Island of Fanoe, south Denmark. Of them up to the end of 1908 twenty-two had been recovered in the autumn and winter—seven in western France from a little north of the Loire to a little south of the Gironde, two from Holland, one from south Spain, one from north Italy, and the following from the British Isles:—

- 1907 Dec. 10. Near Askeaton, co. Limerick, Ireland.
- 1907. Dec. 31. Junction of Rivers Feale and Cashen, co. Kerry, Ireland.
- 1908. Jan. 5. Leominster, Herefordshire.
- 1908. Jan. 17. Tregothnan, near Truro, Cornwall.
- 1908. Jan. 30. Wareham, Dorset.
- 1908. Feb. 24. Enniskillen, co. Fermanagh, Ireland.
- 1908. Feb. 28. Near Maryborough, Queen's Co., Ireland.
- 1908. Aug. 21. Woodlawn, co. Galway, Ireland.
- 1908. Dec. 30. Southampton.

Herr Mortensen informs me (*in litt*) that he marked more Teal captured in the same way in the autumn of 1909, and that the birds recorded above are three of those marked in 1909.

H. F. W.

#### THE EFFECT OF FOOD-SUPPLY UPON FECUNDITY.

It will be interesting to follow the argument of Mr. Percy F. Bunyard; also the additional cause, or causes, for the "remarkable phenomenon" of the recurrent years of unusual fecundity, which Dr. Ticehurst foreshadows as a subject which will become more fully understood than at present.

\* Vidensk. Medd. fra den Naturhist. Forening i Köbenhavn, 1908, pp. 127-139.

I thoroughly agree with the—as I consider—ascertained facts, as to the direct action of food-supply upon fecundity. And that makes it more interesting to me, to await the conclusions which may be arrived at by Mr. Bunyard, whose very positive statement raises expectation to an unusual extent.

Regarding the observations upon the fecundity of such species as the Rough-legged Buzzard, Snowy Owl and lemming in Scandinavia; and the Short-eared Owl and vole in Scotland (*and Greece!!*)—as ascertained by a “Royal Commission” appointed to examine and report on the “Vole-Plague in Scotland”; such need not be here enlarged upon. Surely indeed, they, at least, are common property!

As regards “some other cause” foreshadowed, or suggested by Dr. Ticehurst—*so far*, I believe that statement to be quite legitimate and correct. As to what that is, may remain to be “plotted down” and actually “pinned down” yet. So far, I am inclined to the opinion that if “some other cause” be discovered, that cause will be found to be only a cause dependent on the primary cause, or, in absolutely natural sequence of causes and effects. Without going into a long and perhaps needless proof or discussion, the sequence may be something like the following:—

A. Recurrent abundance of food-supplies affecting fecundity of say—plant-life, seeds, etc., due to exceptional or recurrent climatic changes and conditions. Probably these will be found to recur in cycles of shorter or greater extent and at intervals, let us say—*within knowledge*—seven to ten years in some cases.

B. Consequent recurrence of “abnormal” or “*cyclic*” fecundity of life dependent on such food-supplies, which have been caused by recurrent cyclic periods of climatic conditions.

C. Consequent recurrence of other life again dependent on the food-supplies under B.

D. Consequent recurrent increase of life affected by A, B and C.

E. Consequent congestion in any area or areas of whatever magnitudes, caused by climatic conditions of cycles of extra recurrent fecundity.

F. Consequent excess of population so produced in cycles of say seven to ten years as has been demonstrated by large *sheaves* of vermin schedules returned from most of the large and extensive estates offices in Scotland and elsewhere, and by the “*chain of destruction*” clearly traced by the Vole-Plague investigations in Scotland (*and Greece*), and of lemmings by Professor Collett of Christiania and others; and the

arrival of Short-eared Owls in one case, and their subsequent disappearance; and in the case of Rough-legged Buzzards and Snowy Owls in Scandinavia, following upon great lemming years, as shown by the writings principally of Professor Robt. Collett.

G. Migration, or rather Dispersal forced by circumstances as detailed under A—F. A phase which may be demonstrated both under *Dispersal* and *Increase of Distribution*, and under *wider waves*—so to speak—and more *force* during the bi-annual “Emigration” and “Immigration.”

The above conclusions may fitly be assigned to a simple and plain *Law* in Nature, namely, that as Nature abhors a vacuum so, during extension and expansion, does animal life fill spaces which are suitable to requirements of life.

J. A. HARVIE-BROWN.

I AM naturally very reluctant to differ with so great an authority as Professor Collett, but I should like to remind the Rev. F. Jourdain and Dr. N. F. Ticehurst that apparently some doubt existed in Professor Collett's mind in regard to the effect of the abundance of the lemming on the fecundity of the Rough-legged Buzzard, Snowy Owl, etc., for he says, “Now it is a fact that many birds breed more abundantly when food is plentiful than under ordinary circumstances. This, for instance, has been shown to be the case with several species of the Owls that prey principally on small rodents, which, in certain years, are exceptionally numerous, but whether such increase in the procreative power is owing to the abundant supply of food, or is to be traced *rather* to the cause (whatever it be) which renders the small rodents *in that very year* so much more prolific than common, is still an open question” (Robert Collett, “Ornithology of Northern Norway,” p. 38). I am in entire accord with the opening remark\* of the above quotation, which is supported by the following words of the late Professor Newton: “The lemming migrations . . . appear to draw all the birds of prey in the north into one focus” (“*Ootheca Wolleyana*,” Part I., p. 180). To my mind herein lies a possible explanation. If I am to be guided by what I have read on the subject, it would appear that the *Raptores* in the districts covered by the

\* We think Mr. Bunyard has mistaken the meaning of the passage quoted. By “many birds breed more abundantly,” Prof. Collett meant, we take it, that many individuals reared more young and not that more individuals bred, since he refers later to “such increase of *procreative power*” [italics are ours] as an ascertained fact.—EDS.



lemming have become practically parasitical on these animals, and so far as I am able to judge are generally to be found in greater numbers wherever these rodents are concentrated, the result being that many more nests are built in the area covered than would be the case under normal conditions. Consequently many more nests are found by collectors in that area, with both large and small clutches; *incubated* clutches of *two* and *three* Rough-legged Buzzard have been found on several occasions in a lemming year, and I do not consider clutches of four and five are unusual, for it can be proved that they are found every year; clutches of *six* must be considered exceptionally rare, and are probably produced by old birds in their prime.

The strongest evidence against food increasing the powers of production is to be found in the fact that it does not affect birds which normally lay a completed clutch of one, two, or four eggs, though it is well known on rare occasions that even those birds depart from the rule.

It may be of interest to note that though Buffon's Skua (*S. parasiticus*), which normally lays two eggs, also feeds largely on the lemming,\* no mention has been made of any increase in the normal clutch of the species.

Mr. Gilroy is somewhat emphatic in his remarks (*antea*, pp. 222 and 223), but his "proofs" are not very convincing. In regard to the Sparrow-Hawk, surely if these birds were allowed to have their own way they would naturally largely increase, and consequently there would be a considerable diminution in the food-supply if Mr. Gilroy's theory is correct, this would result in smaller clutches. I know the sandy district in Norfolk to which he refers quite well, and out of twenty clutches of Wood-Lark inspected, sixteen were of four, three of five, and only one of six. In Devon and Wales clutches of five and six occur in about the same proportion. Mr. Gilroy does not say what favourite food of this species is found in Norfolk that is not so plentiful in Wales, nor what is the food found by the Raven on the coast that is not found inland.

PERCY F. BUNYARD.

#### MIGRATION ACROSS THE MEDITERRANEAN.

WITH regard to migration routes across the Mediterranean I obtained some evidence on the 4th and 5th April, 1909. We were steaming for Port Said and were at the time south of the Adriatic, in a region, therefore, which Commander Lynes

\* Robert Collett, "Birdlife in Arctic Norway," p. 38.

has marked as being as a rule comparatively barren of migrant birds. The morning of the 4th was cloudy ; at 9 a.m. the clouds darkened ; at 10 it was raining, and the rain continued throughout the day. Finding themselves enveloped in clouds and unable to see their way—so it seems best to explain what happened—a number of birds came down from the high level at which they had been travelling northward and flew low over the sea. From 9 a.m. till 1 p.m. small flocks of Swallows appeared at intervals, and I must in all have seen over 150. I saw besides about 20 House-Martins, two or three Sand-Martins, one Swift, a dozen Kestrels, two Hoopoes, four Common Herons, four Nightingales, one Black-throated Wheatear, one Common Redstart. Besides these, a good number of small birds passed not far from the ship, yet not near enough for me to identify them. About 5.30 p.m. a flock of over 20 Herons appeared ; some of them circled round the ship all night, and when the sun rose made for the north ; some of the Swallows accompanied us for miles, flying round the boat, thus going a very long distance out of their way. A few passed the night on board, some travelling in the 1st class saloon, some in the 2nd. The next morning was fine and only a few Blue-headed Wagtails and Swallows turned up.

The number of birds seems to me to show that we were crossing what was *at the time* a real migration zone, not a comparatively vacant interspace. But I have no observations to supplement this, and it would be foolish to argue that an isolated case can in any way invalidate Commander Lynes' conclusions, based as they are on a number of observations. But it is remarkable that my fragmentary evidence is supported by what Dr. C. B. Ticehurst reports in the last number of BRITISH BIRDS.

F. W. HEADLEY

## RARE BIRDS IN SUSSEX.

### I.

#### BLACK-HEADED WAGTAIL.

A fine male Black-headed Wagtail (*Motacilla flava melanocephala*) was shot at Winchelsea, Sussex, on May 23rd, 1909. It was examined in the flesh by Mr. W. Ruskin Butterfield.

#### RED-THROATED PIPIT.

A female Red-throated Pipit\* (*Anthus cervinus*) was shot near Rye, Sussex, on April 29th, 1909. It was examined by me in the flesh on the following day.

\* See "A History of the Birds of Kent," by N. F. Ticehurst, p. 104.

## LESSER GREY SHRIKES.

A very fine pair of Lesser Grey Shrikes (*Lanius minor*) were shot near Sidley, Bexhill, Sussex, on April 21st, 1909. I examined them myself in the flesh on the following day.

## BROAD-BILLED SANDPIPER.

A female Broad-billed Sandpiper (*Limicola platyrhyncha*) was shot at Rye Harbour, Sussex, on September 3rd, 1909.

J. B. NICHOLS.

## II.

## BLACK-HEADED WAGTAIL.

A male Black-headed Wagtail (*M. flava melanocephala*) was shot in Romney Marsh (on the Sussex side) on May 26th, 1909. It is now in the Hastings Museum.

## GREY HEADED WAGTAIL.

A male Grey-headed Wagtail (*M. flava viridis*) was shot in Romney Marsh (on the Sussex side) on May 31st, 1909.

## HONEY-BUZZARD.

A male Honey-Buzzard (*Pernis apivorus*) was shot near Northiam, Sussex, in the middle of October, 1909. It was an extremely dark bird, being almost black all over. Another—a female, and apparently an adult—was shot in September near Battle, Sussex.

## LITTLE GULLS.

A pair of Little Gulls\* (*Larus minutus*) in full summer-plumage were shot in the early summer of 1909, on the coast of Romney Marsh (on the Kent side).

For the above information, and for the opportunity to examine these birds, I am indebted to Mr. G. Bristow, taxidermist, of St. Leonards.

C. B. TICEHURST.

## RARE BIRDS IN IRELAND.

SNOWY OWL (*Nyctea scandiaca*).

A male was shot near Ennis, co. Clare, on Nov. 1st, 1909.

OSPREY (*Pandion haliaëtus*).

An adult female was seen on Lough Erne for some days, and at length was shot by a gamekeeper's son on October 4th, 1909, while perched on a dead tree near Castle Archdale, Irvinestown, co. Fermanagh.

\* See "A History of the Birds of Kent," p. 511.

GLOSSY IBIS (*Plegadis falcinellus*).\*

A male was caught in a trap near Banagher, King's Co., on November 14th, 1909. [About October 12th, 1909, one was shot at Malin Head, co. Donegal; another at Straidarran, co. Derry. "Both specimens seemed to be immature." (D. C. Campbell, *Irish Nat.*, 1909, p. 256).—EDS.]

GREY PHALAROPES (*Phalaropus fulicarius*).

One was found dead at Kilbeggan, West Meath, on October 26th, 1909. Another was killed at the lantern of the North Arran Lighthouse on November 15th. Another was shot at Tramore, co. Waterford, on October 27th.

RUFF (*Machetes pugnax*).†

An adult male was shot in the Bog of the Ring, Balbriggan, co. Dublin, on November 18th, 1909, a late date for this species in Ireland.

## VARIETIES OF WOODCOCK AND SNIPE.

A "Sabine's" Snipe very dark in colour and showing no stripes on the back or head was shot near New Ross, co. Wexford, on November 19th, 1909. The bird had been seen during the previous season.

A Woodcock, profusely mottled over the back, wings and head, with white, was shot at Ennis, co. Clare. Varieties of Woodcock are exceedingly rare in Ireland, and I have not met with more than six during a period of thirty years.

W. J. WILLIAMS.

## THE IRRUPTION OF CROSSBILLS.‡

NOTWITHSTANDING our urgent requests for records of Crossbills, many correspondents had omitted to communicate their observations until after the maps published in the last number had been prepared. We shall be glad still to receive notes on the subject, as we think that the progress of the irruption cannot be too fully recorded.

It is of the utmost importance to trace, if possible, what becomes of these birds. Will any of them remain to breed?

\* On October 10th, 1908, I was informed by the Earl of Kingston that a Glossy Ibis had been seen during the previous week on the Shannon, near Carrick-on-Shannon, for several days. This bird, like the two recorded from co. Donegal and co. Derry, showed some traces of white on the neck and was probably immature.—F. C. R. J.

† Mr. R. Warren informs us that the Reeve reported in our last number (p. 232) was shot at Dahybaun Lough, the name being misprinted Daleybann in the "Zoologist."—EDS.

‡ For previous references to this subject cf. pp. 82, 123, 162, 190-194, 226-228.

Will they gradually lessen in numbers or will they suddenly disappear? Will they return to the region where they were bred?

We hope that these questions may be answered by the careful observations of our readers during the next few months. It must be remembered that nesting operations frequently commence in February, so that close watch on the flocks should now be kept to ascertain whether they move off together or break up into pairs, whether their numbers fluctuate and whether they appear in places they have not so far been recorded as visiting.

DURHAM.—First noticed in the east of the county in the last week of June, 1909. By the middle of July they were fairly frequent in the Wear valley near Durham and Wolsingham, and in the last week of July were seen in the Upper Browney valley and Derwent valley (J. W. Fawcett, *Nat.*, 1909, p. 441).

YORKSHIRE.—Eight at Hornby Castle on December 2nd, 1909 (*H. Noble*).

LINCOLNSHIRE.—Six at Bourne on November 25th, 1909 (*H. Noble*).

DERBYSHIRE.—On December 21st, 1909, I examined fourteen Crossbills at Mr. A. F. Adsett's shop in Derby. They were all of the continental form, seven being "red" and seven "green" birds. Four had been sexed, and in each case the red proved to be a male and the green a female. They were shot near Belper: the first three on November 19th, five more on November 23rd and the last six on the 27th. I have also been informed that four Crossbills have been shot in the Melbourne district (*F. C. R. Jourdain*).

NORTH WALES.—The earliest recorded were at Llangollen during the last week of September, 1909. They have been seen repeatedly since in small parties and are probably in considerable force along the Dee Valley. Mr. T. Ruddy saw five at Dolgelly on November 18th, 1909 (they may have been there before, as it was only on that date that Mr. Ruddy arrived) and noted them several times subsequently (*H. E. Forrest*).

SHROPSHIRE.—Flock at Cressage on December 10th, 1909 (*H. E. Forrest*). Small flock at Loynton Hall, near Newport, on December 3rd, 1909, and a larger flock in a different part of the grounds the following day (*H. R. Leach*).

- HEREFORDSHIRE.—Two (one red, the other yellowish-green) at Hope End, near Ledbury, on October 3rd, 1909 (*Harold Hewitt*).
- WARWICKSHIRE.—Flock (about 20) near Stratford-on-Avon on December 4th, 1909 (*R. Hudson*).
- NORTHAMPTONSHIRE.—A male and female sent for preservation from Rushden on October 16th, 1909 (*W. C. Cattell*). Mr. C. E. Wright (*in litt.* Dec. 20) says that about a hundred or more Crossbills were in the woods near Kettering “last week,” feeding on the spruce-cones (*F. C. R. Jourdain*).
- BEDFORDSHIRE.—A single red male near Woburn on October 24th (*C. Oldham*). A flock of sixteen and a party of eight to ten seen on December 24th, 1909, at Woburn (*The Duchess of Bedford*).
- NORFOLK.—The Rev. E. T. Daubeny, writing from Swaffham in August, says that “for some days half a dozen or so [Crossbills] have frequented the trees round my garden” (*Nature Notes*, 1909, p. 188).
- SUFFOLK.—A small flock at Euston Hall on December 7th, 1909, and a much larger flock about three miles distant on December 9th (*H. Noble*).
- HERTFORDSHIRE.—Three flew over Cassiobury Park, Watford, on October 17th, 1909. Four were in a larch-plantation near Marseyatestreet on December 5th. A flock of 20–30 in a plantation of larches and firs at Aldbury, on December 12th (*C. Oldham*).
- BERKSHIRE.—Two near Easthampstead on October 25th, 1909 (*B. G. Stilwell*).
- HAMPSHIRE.—A flock (about 20) at Bramshill, near Winchfield, on November 6th, 1909 (*B. G. Stilwell*).
- SUSSEX.—First noticed in St. Leonard’s Forest, near Horsham, in July, 1909; greatly increased in numbers in September; in October and November flocks have been present in the fir-belts between Leonardslee, Peas Pottage, and Faygate (*J. G. Millais, Field*, 4, xii., 1909, p. 1049). A flock (12–15) at Muntham, Horsham, on August 5th, 1909. A very large flock (estimated at fully 100) in Scotch firs near Midhurst on November 18th (*Captain E. S. Godman*).
- KENT.—Many (some flocks nearly entirely consisting of red birds) at Ashurst on November 6th, 1909. Many at Hemsted, near Cranbrook, on November 16th and 17th. Small flocks at Hever on December 2nd (*E. G. B. Meade-Waldo*).

IRELAND.—*Co. Waterford*.—Crossbills were resident here at Cappagh, co. Waterford, and bred regularly from 1888 to 1904, after which they were only observed on a few occasions until this year, 1909. I give our observations in this locality:—January 25th.—Two seen by John Power on Scotch firs at Rockfield. June 5th.—The notes as of a brood of Crossbills, flying over at Cappagh, heard by John Power. October 12th.—I saw and heard a few. October 17th.—Six feeding on Douglas fir. October 23rd.—John Power saw a Crossbill with a horse-chestnut in its bill. October 24th.—Crossbills heard at Cappagh. November 3rd.—One seen at Cappagh. I also saw four Crossbills on the roof of Woodstock House, where they had probably gone to drink out of the eave-gutters, as is their frequent habit.

These few intermittent notices may betoken a fresh arrival of Crossbills when taken in connection with the great invasion of 1909 into western Europe, including the British Isles, but the birds seen of late were few and far between as compared with those that frequented the Cappagh woods before 1904 (*R. J. Ussher*).

*Co. Down*.—A flock (about a dozen) at Hillsborough on July 12th, 1909. About six on November 30th, and about a dozen on December 3rd (*N. H. Foster*).

*Co. Kildare*.—Six at Morristown Biller, Newbridge, on November 16th, 1909, about twenty on the 20th. Heard nearly every day since up to December 11th, 1909 (*Major B. R. Horsbrugh*).

SCOTLAND.—A very large flock near Inverness on October 1st, 1909 (*H. R. Leach*).

### DIMORPHISM IN THE CROSSBILL.

SOME time ago I took the trouble to investigate with a large series the question raised by Mr. Stubbs, viz., the relative positions of the mandibles in the Crossbills, and I will here give my results:—

<i>Loxia curvirostra curvirostra</i> , L.	♂		♀
Upper mandible to the right	.. 22	..	15
"    "    "    left	.. 20	..	9
<i>Loxia curvirostra himalayensis</i> (Blyth).	♂		♀
Upper mandible to the right	.. 8	..	6
"    "    "    left	.. 10	..	3
<i>Loxia curvirostra americana</i> (Wils.).	♂		♀
Upper mandible to the right	.. 9	..	8
"    "    "    left	.. 7	..	7

Of the sub-species *L. c. albiventris* (Swin.), *scotica* (Hart.), *guillemardi* (Mad.), and *luzoniensis* (Grant). I have only been able to examine a small number, but in these this dimorphic character of the bill was present in about equal numbers, except in *guillemardi*, where, out of eight specimens, only in one was the upper mandible to the right.

<i>Loxia pytyopsittacus</i> (Borkh.)	♂	♀
Upper mandible to the right	.. 11..	.. 6
"    "    "    left	.. 12	.. 10
<i>Loxia leucoptera bifasciata</i> (Brehm).		
<i>Loxia leucoptera elegans</i> (Hom.)	♂	♀
Upper mandible to the right	.. 4	.. 4
"    "    "    left	.. 8	.. 8
<i>Loxia leucoptera leucoptera</i> (Gmelin).	♂	♀
Upper mandible to the right	.. 8	.. 7
"    "    "    left	.. 21	.. 9

Taking all the sub-species of *Loxia curvirostra* together I found that:—

	♂	♀
Upper mandible to the right	.. 48	.. 26
"    "    "    left	.. 48	.. 27

and taking all the sub-species of *Loxia leucoptera* together that:—

	♂	♀
Upper mandible to the right	.. 12	.. 11
"    "    "    left	.. 29	.. 17

It would seem that in all the sub-species of *Loxia curvirostra* the upper mandible is as often to the right as to the left of the lower mandible, the apparent discrepancy in the females of the typical form, and in *himalayensis* being, I think, accidental. In the sub-species of *leucoptera* it would appear that the upper mandible passes to the left of the lower twice as frequently as it does to the right. If this is so it is very curious, but I should like to have examined a larger amount of material before saying definitely.

C. B. TICEHURST.

#### SNOW-BUNTING IN DORSET.

I WAS yesterday (December 9th, 1909) visiting a house in Wareham, Dorset, and saw there a stuffed Snow-Bunting (*Plectrophenax nivalis*). The owner did not know what the bird was, but had shot it on the edge of Poole Harbour, in the first week in October, 1908. I cannot find any record of a Snow-Bunting in Dorset since 1846 (Mansel-Pleydell).

M. WILLIAM PORTMAN.

#### ROSE-COLOURED STARLING IN NORTHAMPTONSHIRE.

A ROSE-COLOURED Starling (*Pastor roseus*) was shot near Thrapstone at the end of July, 1908, and is now in my possession.

W. C. CATTELL.



## SHORT-TOED LARK IN SUSSEX.

MR. BRAZENOR, the taxidermist of Lewes Road, Brighton, showed me in the flesh a Short-toed Lark (*Alauda brachydactyla*). It was caught on the Downs to the north of Brighton on November 16th, 1909, curiously enough within a short distance of the place where the American Bittern was taken at the end of October. On dissection the bird proved to be a female.

HERBERT LANGTON.

[This bird is now in the possession of Mr. J. B. Nichols, who very kindly showed it to me.—H.F.W.]

## SWIFTS EATING DRONES OF THE HIVE BEE.

FOR several years I have noticed that Swifts (*Cypselus apus*) regularly "hawk" for bees round my hives. Thinking that they must be destroying a great many bees, I have from time to time shot some eight Swifts thus employed. On opening these birds I have found in every case that all the perfect bees in their stomachs were drones, and in no case did I find a single worker bee. A specimen which I sent to the editor of this magazine has been examined by Mr. C. J. Gahan of the British Museum, who kindly reports that the contents of the stomach was as follows: Six drones of the common hive-bee, remains of two other small *Hymenoptera*, about a dozen small *Diptera* and *Aphidæ* and four small beetles. I at all events am now quite satisfied that the Swifts are beneficial rather than harmful to my hives.

ERICK LACEY.

## RAPID RE-MATING OF THE PEREGRINE FALCON.

ALL writers on ornithology have commented on the mysteriously rapid re-mating of the Peregrine Falcon (*Falco peregrinus*), but the following incident may be worth recording.

On March 21st, whilst rambling round an out-of-the-way district in a northern shire, I located a pair of Peregrines on a large inland crag, and sitting below I watched them for over an hour, the observation being made particularly interesting from the fact that they were waging warfare on a pair of Ravens which were busily engaged making a new nest, their first having been destroyed by the fall of a big snow-cornice. From what I saw the Ravens were coming off a bad second! At Easter I was in the district again, and on April 9th I set off with a friend to see if the birds were still there. We

went over to the top of the crag, but to our surprise could see no sign of the Peregrines, though on one pinnacle we found the remains of a pigeon, evidently killed within twelve hours, proving that the Falcons were still about, though their non-appearance more than puzzled us. We knew that on this rock there were only three possible nesting-sites, so down we climbed, intending to visit each. On reaching the first we found a perfect "scrape," and to all appearance the birds had been there quite recently. We stood there discussing the situation, when my friend happening to look over the ledge, saw the female Peregrine lying dead on another ledge about twenty feet below us. This ledge was perfectly inaccessible without ropes, but I very much coveted that bird, and the only course seemed to fasten sticks together and try and push her over on to the "scree" about 100 feet below us. My friend volunteered to get some sticks from some small trees in a gully close by, whilst I, lazily inclined, sat back on the ledge. Quite suddenly there was a rush of wings and a tiercel "streaked" in, and actually for a brief moment stood on the ledge within a few feet of where I sat. Seeing me he dashed off and began to wing up in wide circles, and then to my surprise as I watched he was joined by another Peregrine, which by the aid of glasses I made out to be a female, and then for some minutes I was an interested spectator of the tiercel trying to entice what was evidently his new partner to venture nearer to the rock, but with evident shyness (or perhaps coyness) she hung away always up at an immense height. Once again the tiercel dashed in to within about twenty feet of where I sat, but naturally enough he did not repeat his former mistake, and quickly sheered off and rejoined the Falcon, now higher up still, and after a few wide circles they went off, leaving the valley altogether. We then got to work, and after some little difficulty pushed the dead Falcon on to the "scree" below. From all appearances she could not have been dead more than about thirty-six hours. I sent her off at once to be set up, and afterwards on my return home was told that she held an egg almost ready for extrusion. On April 28th the second eyrie on the rock contained a clutch of four exceptionally fine eggs, but these were evidently taken, for on May 20th on visiting the rock again we disturbed the Falcon off the first nesting-site to which we climbed, and found two fresh eggs, and on May 22nd there were three eggs, which subsequent watching proved to be the full clutch.

GWYNNE WITHERINGTON.

## PINTAIL IN SUSSEX IN AUGUST.

WHILE shooting at the decoy-pond in the parish of Pease-marsh in east Sussex on August 28th, 1909, one of the guns shot a Pintail (*Dafila acuta*). On examination I found it to be an adult drake in almost full eclipse plumage.

The Pintail is one of the least common of the surface-feeding ducks in east Sussex, and is most usually obtained in hard weather in winter, though I have seen examples on the spring migration so late as April 21st in the adjoining parts of Romney Marsh, and others have been recorded so late as May 17th.

N. F. TICEHURST.

## LONG-TAILED DUCK IN MERIONETH.

ON December 13th, 1909, an immature female Long-tailed Duck (*Harelda glacialis*), shot at Towyn, was brought to me for identification. As stated in my "Vertebrate Fauna of North Wales" the Long-tailed Duck has been obtained several times on the estuaries at Portmadoc, and once or twice on the Mawddach and Dovey estuaries, but the present example is the first recorded on the Dysynni estuary.

H. E. FORREST.

## VELVET-SCOTERS ON THE NORTH COAST OF WALES.

As there appear to be only two records of the occurrence of the Velvet-Scoter (*Edemia fusca*) on the North Coast of Wales (*cf.* Forrest's *Vertebrate Fauna of North Wales*, p. 293) I think it is worth recording that I watched four examples of this bird in Llandudno Bay on November 30th, 1909. They were perhaps a quarter of a mile from me, but with my binoculars and the direct light of the sun I saw them to advantage. The white bar on each wing and the white patches about their eyes could be distinctly seen, but from the colour of their plumage—dark brown, with the exception of their breasts which were dull white—it is evident that they were either female or immature birds. They dived repeatedly and were not consorting with the more abundant Common Scoter.

R. W. JONES.

## FEMALE BLACK GROUSE ASSUMING MALE PLUMAGE.

AMONGST game-birds, examples of females exhibiting the plumage of the males in varying degree are not rare in

certain species; but in the case of Black Grouse (*Tetrao tetrix*) this phase of plumage is sufficiently uncommon to be worthy of note. On November 15th, 1909, the Hon. Douglas Cairns sent me a beautiful specimen of the dark variety in which the whole of the plumage is a complete intermixture of Greyhen and Blackcock feathers. The breast and flanks are almost black, but the lower parts are edged with white, whilst the scapulars, head, nape and neck are somewhat like the Greyhen, only much darker and shot with purple. There is a good deal of white on the cheeks and throat, as is invariable in these "hen-cocks," whilst the rump is like the Blackcock, the feathers being edged with a broad band of metallic blue. Nearly all of the British varieties of this dark phase which I have examined have possessed elongated outer tail-feathers, which have been, with two exceptions, uncurled; whereas in the specimen sent by Mr. Cairns the tail was beautifully lyrate, and similar to that of an adult Blackcock. On dissection I found the ovary small, black, and atrophied, and there were no marks of old shot wounds. This bird was shot on November 15th at one of the drives of the Duke of Buccleuch's moors at Langholm, in Dumfriesshire. Curiously enough a few days later Mr. Cairns, walking upon the same moor, picked up the decomposed body of another Greyhen, and his observant eye at once noticed that the tail was most unusual. This he also sent to me, and it proved to be a female in normal plumage, but with a complete lyrate tail, marked to the curled ends with the irregular bars of black on rich brown.

J. G. MILLAIS.

#### SPOTTED CRAKE IN NORTHAMPTONSHIRE.

A SPOTTED Crake (*Porzana maruetta*) was caught alive near Wellingborough on October 10th, 1909, and was kept for some time until killed by a cat. I saw the bird at the taxidermist's and he tells me that another was killed at the same place two years ago.

W. C. CATTELL.

#### BLACK-WINGED PRATINCOLE IN YORKSHIRE.

IN September, 1909, Mr. J. M. Charlton informed me that a Pratincole had been shot on August 17th, 1909, by Mr. W. S. Charlton, near Danby Wiske, near Northallerton, in the North Riding of Yorkshire. The bird was feeding among a flock of Lapwings. Mr. Charlton kindly had the bird examined at my request, and informed me that the under-wing was black.

Hoping to see the specimen myself and to make quite certain of its identity, I have delayed publication of the occurrence. Meanwhile, however, the bird has been examined by Dr. Steward and Mr. Riley Fortune, who identified it as the Black-winged Pratincole (*Glareola melanoptera*), and the latter has published the following particulars of it in the "Naturalist" (1909, p. 372):—"It differs distinctly from *Glareola pratincola*



Black-winged Pratincole (*Glareola melanoptera*) shot near Northallerton, Yorkshire, on August 17th, 1909.

in the secondaries not being tipped with white, and in having the under wing-coverts and axillaries jet black instead of chestnut. The specimen resembles the figure of the bird of the year in Dresser's "Birds of Europe," with the exception of having the dark bridle-like marking round the throat, though this is not nearly so conspicuous as in the adult plumage of *G. pratincola*."

There seems no doubt therefore that this bird is an example of *Glareola melanoptera*, a species nearly allied to the Collared Pratincole and with a more eastern range. It

will be remembered that three of these birds were shot in Kent in May and June, 1903, and these being the first occurrences in the British Isles the species was included by the late Howard Saunders in his paper on "Additions to the list of British Birds since 1899" (*cf.* Vol. 1, p. 15). We are much indebted to Mr. Charlton for the photograph which is reproduced in the accompanying figure.

H. F. WITHERBY.

### BLACK TERN IN HAMPSHIRE.

ON August 3rd, 1909, I watched at close range a single Black Tern (*H. nigra*) hawking over the Farlington Marsh near Langston Harbour, in company with some Black-headed Gulls. This Tern was either a full-grown young bird of the year or an adult nearly in winter plumage.

H. LYNES.

### COLORATION OF THE SOFT PARTS OF THE SLAVONIAN GREBE.

As I read in Seebohm's "British Birds" that the irides of the Slavonian Grebe (*Podiceps auritus*) are "crimson," and as they are illustrated thus in both Gould's and Lilford's books, it may be worth recording that the iris of this Grebe in the month of November is a bright rose-pink, as nearly as possible the colour of pink blotting paper.

They are abundant where I am staying in the Western Outer Hebrides, and I have shot three in the last few days, to enable me to make an accurate record of the colour of the eyes, bills and legs at this time of year.

In Gould's "Birds of Great Britain" the bird is shown with a white tip to the bill. In Lord Lilford's book it is red, which may be correct in the breeding-plumage, but unfortunately the artist has also given the bird in winter-plumage a red base and tip to the bill. The bill at this season is a "washed-out" grey-blue, darker towards the base of the upper mandible. There is not a trace of crimson on it.

The front of the legs and upper sides of the feet are the same colour, the toes having yellow edges, but the backs and under sides (uppermost when swimming) are almost black. The throat and breast are pure white.

The Slavonian Grebe takes very readily to flight, sometimes settling again within two or three hundred yards, but more often flying quite out of sight.

On a calm day, as many as eight or ten may be seen at one moment amongst these islands.

M. BEDFORD.

[The colouring is given in Saunders' "Manual" (2nd ed., p. 722): *bill*—nearly black, except the tip, which is whitish; *irides*—red (becoming paler after the autumn moult); *legs and toes*—dark greenish-brown outside, yellower on the inner surface. "Yarrell" (4th ed., p. 131): *bill*—black, both mandibles of horn-coloured white at the tip; *irides*—vermilion-red with a narrow white ring; *legs and toes*—dark greenish-brown outside, varied with yellowish-green on the edges and inner surface. Macgillivray (Vol. V., pp. 264-269), whose descriptions are generally most careful, says that the *bill*—in the adult is bluish-black with yellow tips, and in the young in first winter, dark bluish-grey, with basal half of lower mandible basal margins of the upper, and tips of both, yellow; *feet*—in adult, dusky, tinged with grey externally, dull yellow internally and on both edges of the tarsus; in young, bluish-grey externally, tinged with greenish-yellow internally.

Macgillivray's description of the colours of the bill and feet of what he describes as the young bird in first winter agrees so closely with that of the Duchess of Bedford that I would suggest that all the birds Her Grace has noted were *possibly* in first winter-plumage.—H.F.W.]



# REVIEWS

*Report on the Immigrations of Summer Residents in the Spring of 1908: also Notes on the Migratory movements and Records received from Lighthouses and Light-vessels during the Autumn of 1907.* By the Committee appointed by the British Ornithologists' Club. (Forming Vol. XXIV., Bull. B.O.C. Edited by W. R. Ogilvie-Grant.) 29 Maps. Witherby & Co. 6s.

THE appearance of this the Fourth Report of the B.O.C. Migration Committee, although not so punctual as that of the birds of which it treats, will be welcomed by all those interested in the subject. The Report takes the same form as the previous one, but an additional feature is the detailed account of the observations recorded at the "Lights" during the autumn of 1907. We may note that in reference to our criticisms of the table of arrival areas in previous reports\* the Committee explain that it seemed to them of great importance to keep the form of the Reports as uniform as possible. If the table is really misleading, as we believe and as the Committee to a certain extent agree, we cannot see that this explanation is in any way a good one. In the present report, for instance, the Ring-Ouzel is said (pages 10 and 11) to arrive *solely* on the western half of the south coast and also on the south-east coast. As both of these cannot be correct it is explained that the earlier arrivals appeared first in the west and later the birds arrived in the south-east, but that these latter probably consisted of continental breeding birds. But on turning to the account of the species (pages 41-44) we find that for the last four years the Ring-Ouzel has appeared first in Yorkshire, and there seems to be no observation to show at what point these birds have entered the country, unless the occurrence in Kent, on March 30th, in this Report may be some indication of its entry through the *eastern* side of the south coast.

The wintry weather of the spring of 1908 is not likely to be forgotten, and that this had a considerable effect in retarding the northward progress of the immigrants has already been mentioned (see *supra*, page 232) and is borne out by this Report.

\* For notices of the two previous Reports see Vol. I., p. 30, and Vol. II., p. 247.



Interesting items in this report are the following: a Blue-headed Wagtail (*M. flava*) at St. Catherine's Light, Isle of Wight on the night of April 27th-28th, and at Shipley, Yorks., on May 2nd and 3rd, 1908; Nightingales (*D. luscinia*) in Cheshire (? locality); the Continental Robin (*E. r. rubecula*) at St. Catherine's Light, on March 25th and April 23rd, 1908; Woodchat ((*L. pomeranus*) in Cornwall, on May 12th, 1908; two Montagu's Harriers (*C. cineraceus*) in Surrey, on April 8th, 1908; Hobby (*F. subbuteo*), in Cornwall, on May 7th, 1908; Garganey (*Q. circia*), in Dorset, on April 27th, and in Kent, on May 2nd, 1908; two Avocets (*R. avocetta*) in Kent, on May 17th and 26th, 1908; Black Terns (*H. nigra*) in Cheshire, on April 29th, in Yorkshire, on April 30th, and in Kent (three pairs) on May 2nd, 1908; the nesting of a pair of Lesser Black-backed Gulls (*L. fuscus*), in Kent, in the spring of 1908.

The value of these reports is very high and is very largely increased as each fresh one is added to the series.

H. F. W.

We have received the *Transactions of the Norfolk and Norwich Naturalists' Society* (Vol. VIII., Part V.), in which we note an article on "Bird-life in the Meres," by W. G. Clarke, who observed two Ruddy Sheld-Ducks on Langmere, on April 13th, 1906; the "Additions to the Birds of Norfolk," by J. H. Gurney and T. Southwell, bring the total up to 317; most of these have already been reported in our pages, but we note the occurrence of a Blue-headed Wagtail (*M. f. flava*), on May 3rd, 1908, and the omission of one already recorded (Vol. II., p. 237).

In Mr. Charles Whymper's *Egyptian Birds* (A. & C. Black, 20s. net), British ornithologists will find some charming coloured pictures—a good many of the subjects being of birds on the British list. Mr. Whymper has also made a few remarks on the winter habits of migrants, such as the Bluethroat, which he has heard "singing most enchantingly" in the end of March, and the Reed-Warbler, which he has frequently heard singing in the winter.

The well-known American ornithologist, Mr. Frank M. Chapman, has much of special interest to bird-photographers in his *Camps and Cruises of an Ornithologist* (New York: Appleton, 3 dollars). There are 250 photographic illustrations, and although the book is mainly devoted to

American birds, a chapter giving Mr. Chapman's impressions of English bird-life, during his visit here in 1905, will be read with interest by British ornithologists.

Baron Snouckaert van Schauburg has sent us his *Avifauna Neerlandica* (Leeuwarden: Meijer & Schaafsma, 3.75 francs), which, although written in Dutch, will prove useful to those of us who are in the habit of visiting Holland and want a handbook on its birds.

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## RICHARD BOWDLER SHARPE.

(PLATE XIII.)

THIS great ornithologist passed away on Christmas Day, 1909, at his home at Chiswick, after a brief illness. The news of his death must have come as a shock to his many friends, who were unaware of his condition. Dr. Sharpe was present at the meeting of the British Ornithologists’ Club on the evening of the 16th of December. He then

seemed to be in his usual health and cheerful mood. Next day he took to his bed, pneumonia and other complications supervened, and the end came early on the morning of the 25th.

By his death the Zoological Department of the British Museum has lost a remarkable personality and a distinguished member of its staff, whose kindness of heart and genial nature had endeared him to all his colleagues. Those of us who knew him intimately have lost a dear friend and cheerful companion, whom we shall long miss from our midst. His exuberance of spirits and inexhaustible fund of humour, which found vent even a few hours before his death, have enlivened many an hour passed in his company, for even the most melancholy of his friends could not feel dull in the cheering presence of the late Head of the Bird Room. But to a wider circle of working ornithologists, both at home and abroad, the death of Dr. Sharpe means the loss of a much respected and esteemed fellow-worker, who for well nigh forty years occupied a prominent position in their ranks, and who was ever most kind to those seeking his help, and in imparting information to his brother ornithologists less learned than himself.

Richard Bowdler Sharpe was born in London on the 22nd of November, 1847. He was the eldest son of Thomas Bowdler Sharpe, and grandson of the Revd. Lancelot Sharpe, Rector of All Hallows Staining in the City, and for many years Headmaster of St. Saviour's Grammar School in Southwark. Thomas Bowdler Sharpe, the father of the subject of this memoir, was a publisher in Skinner Street, Snow Hill, publishing among other things Sharpe's "London Magazine." But, fortunately, the boy was not brought up in London. At the age of six he was placed under the care of his aunt, Mrs. Magdalen Wallace, widow of the Revd. J. Wallace, Headmaster of the Grammar School at Sevenoaks. This lady, who was a good Latin and Greek scholar, kept a preparatory school at Brighton, where young Richard passed three

years. At nine years of age he was transferred to Peterborough, where his cousin, the Revd. James Wallace, was installed as Master of the Grammar School. Here the youngster gained a King's Scholarship, which not only guaranteed his education but carried with it a small amount of money, which he increased by his services as a choir-boy in the Cathedral. His cousin, the Headmaster, having accepted a similar post at Loughborough Grammar School, the boy followed thither, and was again successful in carrying off the chief prizes of the school.

At the age of sixteen young Sharpe came up to London, and obtained a clerkship in the establishment of Messrs. W. H. Smith & Son. But even at that early period he was devoting every moment of his spare time to the study of birds, with the determination to earn his living as an ornithologist, and, as a matter of fact, he commenced to write his "Monograph of the Kingfishers" at 186, Strand. After being with Messrs. Smith & Son for nearly two years, Sharpe, in 1865, entered the employment of Mr. B. Quaritch, the well-known bookseller, where he had good opportunities of seeing the finest books on birds. It was at this stage of his life that he worked hard at his first "Monograph," writing much of it in the small hours of the morning, and applying every penny that could be spared from his slender income to the purchase of specimens of Kingfishers.

In 1867, at the age of nineteen, Sharpe was appointed first Librarian to the Zoological Society of London, a post he held for more than five years. Commenced when he was seventeen years of age and finished when he was twenty-two, the "Monograph of the Kingfishers" was published during these years. It was issued in quarterly parts, and illustrated by a hundred and twenty-one coloured plates. The publishing price was eight guineas, but the book speedily ran out of print, and now commands a much higher figure in the market. Of this masterly work a well-known naturalist said that it was "destined

to inaugurate a new era in the history of ornithology." Now it can be affirmed that the prediction has been verified.

Having successfully completed his work on Kingfishers, Sharpe began a comprehensive history of the "Birds of Europe," in collaboration with Mr. H. E. Dresser, to which he contributed a large amount of matter. He had, however, to abandon the project before it was finished, when, on the death of Mr. George R. Gray, in the year 1872, he was offered and accepted the post of a Senior Assistant in the Department of Zoology of the British Museum. Dr. J. E. Gray was then the Keeper of the Department, and it was on his strong recommendation of Sharpe as a rising ornithologist of considerable merit that he was specially appointed to a senior position in the Museum to take charge of the collection of birds. It is of interest to note that Sharpe's appointment bears the signatures of the Archbishop of Canterbury (Dr. Tait), the Lord Chancellor (Roundell Palmer, Lord Selborne), and Mr. Speaker Brand (afterwards Viscount Hampden), the three Principal Trustees of the British Museum.

The high reputation he already enjoyed as a working ornithologist was such that very soon after he had entered on his new duties Dr. Gray, on the suggestion of Dr. A. Günther, the distinguished zoologist, who succeeded Gray as Keeper, entrusted him with the preparation of the first volume of that monumental work, the "British Museum Catalogue of Birds," the most exhaustive undertaking of the kind in existence. The Catalogue embraces not only a list of the specimens contained in the Museum itself, but it gives a full description of every bird in the world known at the time of publication, whether in the Museum or in any other collection; its changes of plumage and the literature referring to its history and determination, together with a brief record of the geographical range of each species and an enumeration of the specimens in the British Museum. The stupendous

character of the task may thus be realised, and it says much for the extraordinary industry and power of work possessed by Sharpe that he was able to write no fewer than eleven of the twenty-seven volumes of which the "Catalogue of Birds" consists, while he was co-author with his colleague, Mr. Ogilvie-Grant, of two others. Some indication of Sharpe's share in the whole work may be gained by the statement that out of 11,548 species described in the Catalogue, 5,181 are contained in his portion, and 6,367 in those parts written by the ten other authors. Volume I. was published in 1874, only two years after Sharpe entered the Museum, and it would probably be difficult to find in the annals of the Department another instance of a book of this size and character having been commenced and completed within two years of the author's appointment to the staff.

Another official publication for which Dr. Sharpe is responsible is his "Hand-List of the Genera and Species of Birds," in five volumes, the last volume having been finished and issued within a few weeks of his death. Although some disagreement with Dr. Sharpe's system of classification and arrangement as given in the Hand-List has been expressed by some of his brother ornithologists, the great value of the Hand-List has been widely recognised, and its completion has been warmly welcomed by ornithologists in all parts of the world.

Prodigious as was the labour involved in the writing of these volumes, their preparation formed only a part of Sharpe's duties. It may here be said that much of his private time was devoted to Museum affairs, in fact a great portion of the Hand-List was written at his home after the day's toil at South Kensington.

From the day he entered the Museum in 1872 to the last hour (literally) that he spent in his beloved Bird Room in Cromwell Road, he never ceased to use every effort to increase and enrich the collection under his charge. No opportunity was missed, whether by persuasive supplication or seductive appeal to the generosity

and patriotism of some wealthy collector, which he could press with irresistible force, or by interesting some departing traveller or explorer in the birds of the regions he proposed to visit, or by impressing on his chiefs the absolute necessity of acquiring by purchase this or that collection, he generally managed to have his way, and thus gradually to absorb every bird that he considered was a desirable acquisition for the national collection. It was indeed a difficult thing for anyone to say no, whether he happened to be the owner of some magnificent collection which Sharpe coveted or some intrepid explorer fresh from a remote region of the globe with a series of specimens which he (the traveller) particularly wished to keep as a memento of his journey, or the chiefs of his Department from whom sanction to a purchase had to be obtained, one and all were utterly unable to resist the boundless enthusiasm, the fervour, the intensity with which the Head of the Bird Room urged his appeal for the enrichment of the national collection. How successful were his efforts may be known when it is stated that in 1872 the cabinets in the Department of Zoology contained not more than 35,000 ornithological specimens, whereas at the present time half-a-million specimens would probably be under the mark—and this increase has taken place notwithstanding the continual weeding out of absolute duplicates.

Among the private collections of birds and eggs which, owing to the munificence of their owners, were incorporated in the national collection during Dr. Sharpe's curatorship, were those of Mr. Allan Hume (Indian), Messrs. Salvin and Godman (General), Colonel Wardlaw Ramsay (Tweeddale collection, Asiatic), Mr. Henry Seebohm (General), Colonel Biddulph (Kashmir and Turkestan), Mr. C. B. Rickett (Chinese), and Mr. F. W. Styan (Chinese), while the acquisitions further included the Wallace collection (Malayan), the Sclater collection (American), the Shelley collection (African), Sharpe's own collection (African), the Gould collection

(General), and the Gould series of Humming-birds. Sharpe's personality and enthusiasm were, of course, an important element in inducing the generous owners to make their munificent donations—how largely responsible he was for some of these gifts may be seen in the following extract from a letter written by Mr. A. O. Hume in July, 1885, offering his splendid collection of Indian birds and eggs as a present to the nation: "Should this collection form as valuable an addition to the British Museum as I hope it may, I trust that it may not be forgotten that its acquisition by the Museum has been solely due to the fact that Mr. Sharpe was at the head of the Ornithological branch of that Institution." The Hume collection consisted of about 82,000 specimens, of which 75,577 skins and eggs, including 258 types, were placed in the Museum cabinets.

On the request of Mr. Hume, Dr. Sharpe was deputed by the Trustees to go to Simla to pack and bring home the collection. He left England on the 24th of April, reached Simla on the 19th of May, and was back in London on the 10th of August, having packed and despatched from India forty cases, weighing half-a-ton each, and bringing with him thirty-eight cases more. He accomplished his mission within four months of leaving England, and in a shorter space of time than had seemed possible to Mr. Hume.

Dr. Sharpe has himself recorded that he considered the gift of the Hume collection was one of the most splendid donations of the kind ever made to the nation.

We may also quote from a letter written in May, 1888, by Colonel Wardlaw Ramsay, in reference to his generous donation of the magnificent collection of Asiatic birds formed by the Marquess of Tweeddale. In writing to Sharpe he says: "I gave it [the collection] to the Museum solely because you were there, and therefore I felt I might have perfect confidence that it would be done justice to."

That at this period of his life, after years of unswerving labour, his services were meeting with some appreciation

in official quarters may be gathered from the following letter sent to him in 1887 by Sir Edward Bond, then the Principal Librarian of the British Museum : " I do indeed take an interest in your herculean task of forming and arranging the Ornithological Collection, and I think the public conscience ought to be awakened to the national indebtedness to you for what you have done and are doing."

In 1891 Dr. Sharpe attended, as President of Section A (Zoology and Comparative Anatomy), the Second International Ornithological Congress, which was held at Budapest, and delivered an address on the " Classification of Birds." He sent a copy to Professor Huxley, who acknowledged it as follows : " I am very much obliged for your ' Review,' which will be extremely valuable to present and future workers. I wish something like it had existed a quarter of a century ago when I was trying to find my way through the chaos of Ornithological Classification. It would have saved me a world of labour, which I am glad to find was not altogether in vain."

In recognition of his eminence and of the prominent part he had taken in the proceedings of the Budapest Congress, the Emperor of Austria conferred upon Dr. Sharpe the gold medal for Art and Science, a distinction reserved exclusively for those who have contributed to the advancement of science or art in Austria-Hungary. In the same year he received an honorary degree of LL.D. from the University of Aberdeen, and an address from the leading American ornithologists congratulating him on the completion of the thirteenth volume of the " Catalogue of Birds," which practically concluded the description of the Passerine Birds of the world. They expressed the warmest appreciation of his labours as an ornithologist, especially of his work in connection with the classification and nomenclature of the Passeres.

The important services rendered by Dr. Sharpe to the Museum and his distinguished career as an ornithologist received well-merited recognition at the hands of the



Museum Trustees in 1895, when, on the recommendation of the late Sir William Flower, then Director of the Museum, he was promoted to the newly-created post of Assistant-Keeper of the Vertebrate Section of the Department of Zoology, a position which greatly extended the sphere of his duties, since the section of which he thus became the Head embraced the Mammals, Reptiles, and Fishes, as well as the Birds, and he was thus brought into closer official relations with those of his colleagues who were in immediate charge of these groups.

His astonishing powers of work were never more in evidence than about the period when, in addition to his multifarious duties in the Bird Room, involving among other things constant personal attention to the many inquiries addressed to him and to the numerous visitors to the Department who daily go there seeking information, he undertook the preparation of his "Hand-List of Birds," giving the name of every known bird, while in his own time he managed to edit Allen's "Naturalists' Library," and to write and publish a number of books, including his "Monograph of the Swallows," a "Monograph of the Birds of Paradise," and a work on the Birds of the Yarkand Mission; based upon the collection and notes of the late Ferdinand Stoliczka. He was also responsible for the "Aves" portion of the "Zoological Record"—a task which was entrusted to him to the end. Further, he delivered a course of lectures at the Royal Institution on the "Geographical Distribution of Birds," and later in the same year (1893) one on "Ancient and Modern Birds."

The International Congress of Zoology met at Leyden in the year 1895. Sharpe went to this gathering, and he was honoured by receiving an invitation to give his lecture on the "Curiosities of Bird-Life" before the Queen of Holland and her mother, the Queen-Regent.

One of the most useful pieces of work which he accomplished as a Museum official is his "History of the Bird-Collection in the British Museum," which was published

in 1906. It is marked with that thoroughness and mastery of detail which distinguishes all his work in which he was keenly interested. While he was writing the "History" he threw himself into the subject to the exclusion of almost all his other literary work, and at the close of his days he was as fond of this production as of anything he had done. The "History" is full of interesting matter, and the biographies of ornithologists are based on a knowledge derived in many cases from personal acquaintance, which he alone possessed.

Another of his achievements, which he used to recall with satisfaction, was his founding of the British Ornithologists' Club in 1892. He was proud, and legitimately so, of the fact that the Club, which owes its origin to his advocacy and effort, has developed into one of the most important centres of ornithological activity in the world, while at the same time the scheme of the Club and the amenities surrounding it, which are largely the creation of Sharpe, have made the meetings of the Club among the most sociable and enjoyable scientific réunions in London.

At the Paris Ornithological Congress of 1900, at which he was present, he was nominated President of the ensuing Congress, which was held with great success in London in 1905. Sharpe, of course, presided over the gathering, which was largely attended by ornithologists from the Colonies and foreign countries, and in his presidential address he gave an interesting account of the origin and progress of the Bird Collection in the British Museum. The Congress is to meet this year in Berlin, under the presidency of Professor Reichenow, and it is sad to think that the familiar figure of our friend, always one of the most popular figures at these international assemblies, will not be there to initiate his successor into the Presidential Chair.

The world-wide distinction which Bowdler Sharpe enjoyed as an ornithologist must, in the fitness of things, always entitle him to a prominent place in the Temple of

Fame among the devotees of his own special science, and his name will ever be honoured by his brother ornithologists, but no memoir of him would be complete without mention being made, however briefly, of the extraordinarily wide range of his knowledge.

An instance of this may be noted in connection with the editing of his "Gilbert White's Selborne," which led him to make literary researches in the records of churches in White's country. He became interested in the architecture and history of the churches, and in a few months he became so devoted to archæology as to make some of his friends seriously wonder whether the ornithologist was not going to develop into an antiquarian of no less renown. He occupied much of his annual vacation in his later years in carrying out investigations into the history of Basing Castle, and with the permission and co-operation of Lord Bolton he spent many weeks in conducting excavations on the site. He thus acquired a store of knowledge on the subject, and collected considerable fresh data connected with the great siege of Basing Castle by the Parliamentarians with a view to the publication of a book embodying many new facts relating to the matter, a work on the writing of which he was engaged at the time of his death.

Sharpe was a man of remarkably wide and varied sympathies and interests. He was above all intensely human, and enjoyed life to the full. His keen sense of humour, his overflowing good nature, his love of pure fun, almost boyish to the last, his buoyant spirits, all combined to give him an irrepressible optimism that must have often stood him in good stead in the stern battle of life in which he had to take his full share, fighting against heavy odds the greater part of his life. He was a delightful companion for a holiday, prone to practical joking, though always of a harmless and inoffensive sort. I remember on one occasion we were driving in a hansom in the neighbourhood of Knightsbridge, when he suddenly stopped the cab and asked the driver whether he knew

where the desert was. "Desert?" exclaimed the driver. "Yes," said Sharpe. "The place where I can retire to for prayer and meditation." "Oh," replied cabby, "I can't say as I knows where the desert is, but the Oratory is close by and handy, sir."

I could mention many other anecdotes of his love of fun, but the space at my disposal will not allow. He was blessed with a wonderfully retentive memory. His ability to recite at length verses and quotations suitable to the occasion, and his store of anecdotes and reminiscences were truly amazing. He was a good sportsman, very fond of a day's fishing or shooting, played cricket up to an age beyond that at which most men give up the game, and for a man of his build possessed wonderful agility, whether playing tennis or other games. In his early days he used to be very fond of watching and collecting birds—one of his favourite haunts being Pagham Harbour.

For many years Sharpe was a familiar figure at the Savage Club, of which he was a very old and most popular member, occasionally presiding at the Saturday house entertainments, when the fact of his being in the chair always attracted a large audience. He was also a member of another well-known literary coterie—the Whitefriars Club, which elected him to an honorary fellowship a few years before his death.

It is, perhaps, not inappropriate to suggest here that the many friends and co-workers of Dr. Sharpe may wish to put on record in some simple yet permanent form the high regard and affection they entertained for him. A memorial bronze tablet, with suitable inscription, might be placed, with the permission of the Trustees of the British Museum in the Bird Room of the Natural History Museum, where he spent so many hours of his life in unremitting labour for the good of the Institution. But, after all, the wonderful collection which he loved so well and did so much to build up will remain for all posterity the best monument to his life's work, and his successors may be trusted to see to it that nothing is done either

to impair its present pre-eminence among the collections of the world, or to diminish the great reputation it enjoys among scientists of every nationality. That such is the case is largely owing to the unstinted labours, boundless enthusiasm and love of his science of our deceased friend, and assuredly no one deserves to be held in more grateful remembrance by all those who are proud of, and interested in the welfare, of our national Museum of Natural History than does Richard Bowdler Sharpe.

Dr. Sharpe married, in 1867, Emily, youngest daughter of the late James Walter Burrows, of Cookham, who survives him, and he leaves a family of ten daughters.

A list of his numerous works and a summary of his published papers, including his many contributions to the journals and proceedings of scientific societies is appended. This list is taken from the "Bulletin of the British Ornithologists' Club," by the kind permission of Mr. W. R. Ogilvie-Grant, the editor of the Bulletin.

C. E. FAGAN.

#### LIST OF WORKS BY R. BOWDLER SHARPE.

- Catalogue of the Accipitres, or Diurnal Birds of Prey, in the Collection of the British Museum. Vol. I., 1874, 8vo, pp. i.-viii., 1-479; pls. i.-xiv.
- Catalogue of the Striges, or Nocturnal Birds of Prey, in the Collection of the British Museum. Vol. II., 1875, 8vo, pp. i.-xi., 1-325; pls. i.-xiv.
- Catalogue of the Passeriformes, or Perching Birds, in the Collection of the British Museum.—Columbiformes, containing the Families *Columbidae*, *Paradiseidae*, *Oriolidae*, *Dicruridae*, and *Prionopidae*. Vol. III., 1877, 8vo, pp. i.-xiii., 1-343; pls. i.-xiv.
- Catalogue of the Passeriformes, or Perching Birds, in the Collection of the British Museum.—Columbiformes. Part I. Containing the Families *Campophagidae* and *Muscicapidae*. Vol. IV., 1879, 8vo pp. i.-xvi., 1-494; pls. i.-xiv.
- Catalogue of the Passeriformes, or Perching Birds, in the Collection of the British Museum.—Columbiformes. Part III. Containing the first portion of the Family *Timeliidae* (Babbling-Thrushes). Vol. VI., 1881, 8vo, pp. i.-xiii., 1-420; pls. i.-xviii.
- Catalogue of the Passeriformes, or Perching Birds, in the Collection of the British Museum.—Columbiformes. Part IV. Containing the concluding portion of the Family *Timeliidae* (Babbling-Thrushes). Vol. VII., 1883, 8vo, pp. i.-xvi., 1-698; pls. i.-xv.
- Catalogue of the Subfamily *Zosteropinae* in the Collection of the British Museum. Vol. IX., 1884, 8vo, pp. 146-203.

- Catalogue of the Passeriformes, or Perching Birds, in the Collection of the British Museum.—Fringilliformes. Part I. Containing the Families *Dicaeidae*, *Hirundinidae*, *Ampelidae*, *Mniotiltidae*, and *Motacillidae*. Vol. X., 1885, 8vo, pp. i.-xiii., 1-682; pls. i.-xii.
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- Catalogue of the Passeriformes, or Perching Birds, in the Collection of the British Museum.—Sturniformes. Containing the Families *Artamidae*, *Sturnidae*, *Ploceidae*, *Alaudidae*, *Atrichidae*, and *Menuridae*. Vol. XIII., 1890, 8vo, pp. i.-xvi., 1-701; pls. i.-xv.
- Catalogue of the Picariæ in the Collection of the British Museum.—Coraciæ and Halcyones, with the Families *Leptosomatidae*, *Coraciidae*, *Meropidae*, *Alcedinidae*, *Momotidae*, *Todidae*, and *Coliidae*. Vol. XVII., 1892, 8vo, pp. 1-346; pls. i.-xii.
- Catalogue of the Fulicariæ (*Rallidae* and *Heliornithidae*) and Alectorides (*Aramidae*, *Eurypygidæ*, *Mesitidae*, *Rhinochetidae*, *Gruidae*, *Psophiidae*, and *Otididae*) in the Collection of the British Museum. Vol. XXIII., 1894, 8vo, pp. i.-xiii., 1-353; pls. i.-ix.
- Catalogue of the Limicolæ in the Collection of the British Museum. Vol. XXIV., 1896, 8vo, pp. i.-xii., 1-794; pls. i.-vii.
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SUMMARY OF PAPERS WRITTEN BY DR. SHARPE.\*

1866 *Naturalist* (1); 1868 *Proc. Zool. Soc.* (2), *Ibis* (1); 1869 *Proc. Zool. Soc.* (5), *Ibis* (4); 1870 *Ann. & Mag. Nat. Hist.* (1), *Proc. Zool. Soc.* (7), *Ibis* (5); 1871 *Proc. Zool. Soc.* (5), *Ibis* (3), *Ann. & Mag. Nat. Hist.* (4); 1872 *Proc. Zool. Soc.* (1), *Ibis* (2), *Ann. & Mag. Nat. Hist.* (1); 1873 *Proc. Zool. Soc.* (5), *Ibis* (2), *Ann. & Mag. Nat. Hist.* (3); 1874 *Proc. Zool. Soc.* (5), *Ibis* (1), *Ann. & Mag. Nat. Hist.* (2), *Stray Feathers* (2); 1875 *Proc. Zool. Soc.* (3), *Ibis* (4), *Ann. & Mag. Nat. Hist.* (1), *Stray Feathers* (1); 1876 *Proc. Zool. Soc.* (1), *Rowley's Ornithological Miscellany* (2), *Ibis* (2), *Stray Feathers* (1), *Bull. Soc. Zool. France* (1), *Nature* (2); 1877 *Proc. Zool. Soc.* (3), *Ibis* (2), *Trans. & Journ. Linn. Soc.* (7); 1878 *Proc. Zool. Soc.* (3), *Ibis* (1), *Rowley's Ornithological Miscellany* (1), *Bull. Soc. Zool. France* (1), *Mittheil. k. Zool. Museums zu Dresden* (1); 1879 *Proc. Zool. Soc.* (5), *Ibis* (1), *Ann. & Mag. Nat. Hist.* (1), *Journ. Linn. Soc.* (2), *Notes Leyd. Mus.* (7), *Phil. Trans.* (1); 1880 *Ann. & Mag. Nat. Hist.* (1); 1881 *Proc. Zool. Soc.* (5); 1882 *Proc. Zool. Soc.* (4), *Ann. Nat. Hist.* (1), *Stray Feathers* (2), *Journ. Linn. Soc.* (3), *Journ. f. Orn.* (1); 1883 *Proc. Zool. Soc.* (1), *Ibis* (1); 1884 *Proc. Zool. Soc.* (3), *Ibis* (2), *Journ. Linn. Soc.* (2), *Notes Leyd. Mus.* (2), *Auk* (1); 1885 *Proc. Zool. Soc.* (1), *Ibis* (1); 1886 *Proc. Zool. Soc.* (5), *Ibis* (3); 1887 *Proc. Zool. Soc.* (4), *Ibis* (1); 1888 *Proc. Zool. Soc.* (4), *Ibis* (2), *Notes Leyd. Mus.* (1); 1889 *Ibis* (1), *Ann. & Mag. Nat. Hist.* (1), *Trans. Linn. Soc. v. Aves* (1), *Compte-Rendu des Séances du Congrès International de Zoologie* (1); 1890 *Ibis* (3), *Journ. Linn. Soc.* (1); 1891 *Ibis* (4), *Nature* (1); 1892 *Proc. Zool. Soc.* (1), *Ibis* (5), *Ann. & Mag. Nat. Hist.* (1), *Bull. B.O.C.* (6); 1893 *Ibis* (5), *Bull. B.O.C.* (17), *Notes Leyd. Mus.* (1), *Natural Science* (1); 1894 *Ibis* (8), *Bull. B.O.C.* (13); 1895 *Proc. Zool. Soc.* (1), *Bull. B.O.C.* (9), *British Bird's Nests* (1); 1896 *Bull. B.O.C.* (10); 1897 *Ibis* (1), *Bull. B.O.C.* (12); 1898 *Bull. B.O.C.* (9); 1899 *Bull. B.O.C.* (10); 1900 *Proc. Zool. Soc.* (1), *Ibis* (2), *Trans. Linn. Soc.* (1), *Bull. B.O.C.* (13); 1901 *Proc. Zool. Soc.* (2), *Bull. B.O.C.* (11), *Compt. Rend. Congr. Orn.* (2); 1902 *Ibis* (2), *Bull. B.O.C.* (16); 1903 *Bull. B.O.C.* (9); 1904 *Ibis* (3), *Bull. B.O.C.* (11); 1905 *Ibis* (1), *Bull. B.O.C.* (1); 1906 *Bull. B.O.C.* (4), *Ornis* (1); 1907 *Ibis* (1), *Bull. B.O.C.* (3), *Ornis* (1), *British Birds* (1), *Journ. Bombay Nat. Hist. Soc.* (1); 1908 *Ibis* (1), *Bull. B.O.C.* (3); 1909 *Ibis* (1), *Bull. B.O.C.* (3), *Ornis* (1).

\* We regret that want of space prevents us from giving the full titles and references of these papers, which will be found in the list in the *Bulletin B.O.C.* The figure after each title in the following list refers to the number of papers contributed to each publication during the year.



THE BLACK WHEATEAR (*Saxicola leucura* (Gm.))  
IN SUSSEX.

A NEW BRITISH BIRD.

THE presence of a pair of birds near Rye Harbour that were described as "Black Wheatears" was first reported to me on August 31st, 1909. On September 6th Mr. Bristow informed me that he had been to the locality on the 2nd and seen two birds which answered to this description on the open grassland near the chemical works, between the town of Rye and the Harbour, a tract of land much frequented by migrating Wheatears, Wagtails, Mistle-Thrushes and other birds. He chased them unsuccessfully for some time, and they eventually flew over the river. On the same day the male was shot by one of the gunning fraternity at Rye Harbour, who are always on the look-out for strange birds, and was received by Mr. Bristow on the 3rd. It was seen in the flesh by Mr. L. A. Curtis Edwards, and examined by me two days later, after it had been stuffed. This bird is now in the collection of Mr. J. B. Nichols, who has kindly lent it for the purpose of producing the accompanying figure.

On the afternoon of September 9th I paid a short visit to the neighbourhood, but failed to meet with the remaining bird, which, however, evaded the attentions of the gunners until the 16th, when it was shot. On examination I found that it was a female, and owing to its having been badly injured by large shot was not in such good condition as the male. The rusty-black colour of its plumage was also in strong contrast to the jet-black coloration of the first bird.

Of the several species of chats that have a considerable amount of black in their plumage, the present species, from its geographical range, is the one that is most likely (or least unlikely) to wander to Britain. On August 11th, 1880, a bird, which Gätke considered without doubt

to have been an adult male Black Chat, was seen on Heligoland, but was not obtained.

The range of the Black Wheatear or Chat is, roughly, southern Europe and northern Africa. Throughout the Iberian peninsula, except in the extreme north, and at Gibraltar, it is common; in southern France and Italy, although rarer, it also occurs, but principally, if not



Male Black Wheatear, *Saxicola leucura* (Gm.), shot on September 2nd, 1909, near Rye, Sussex. (About one-half natural size.)

entirely, as a migrant. A few breed in Sardinia and possibly also in Sicily, but there is no evidence of its occurrence in Corsica or Greece. In northern Africa it is the most generally distributed chat in Tunisia, being especially abundant in the central portion; it is also common on the southern slopes of the Atlas in Algeria, numerous in Morocco, and not uncommon in some districts

of Tripoli. Further east than this it does not occur. Over a great part of its breeding-area this species is a resident, though probably a number of those which breed in southern Europe cross over to north Africa for the winter.

The Black Wheatear is essentially a mountain and rock-loving species, and is only abundant in the most arid rock-strewn districts, and almost every rocky valley and ravine in central Tunis is said to contain its pair of Black Chats. In habits it much resembles the Rock-Thrushes, and seems to form a connecting link between the two genera *Monticola* and *Saxicola*. The nest is one which is unusually hard to find, and is generally situated in a cranny or hole amongst rocks or in the wall of a cave, seldom at any considerable distance from the entrance, though nests under a tuft of grass on the mountain-side are not uncommon. The foundation is built of small pebbles collected by the birds themselves, and when the nest is situated in a more than usually open cranny, a small protecting wall of pebbles is built across the open side of the nest, from which peculiar habit the bird derives its common Spanish name of "*Pedrero*," or Stonemason. One such nest examined by Colonel Willoughby Verner was defended by a wall 9 inches long and  $2\frac{1}{2}$  inches high, composed of no less than 282 stones of all sizes, from a walnut to a pea; the foundation of the nest was composed of 76 larger stones, the largest of which weighed 2 ozs., the total weight of all the stones being  $4\frac{1}{2}$  lbs. The nest itself is somewhat bulky, and is composed of coarse grass, neatly and plentifully lined with hair and wool.

The eggs, which number four or five, vary in colouring from a delicate white to light greenish, spotted sparsely with lake-brown shell-markings and reddish surface-spots, generally forming a zone at the blunt end. Average measurements 24.2 by 17.6 mm.

The adult male is black and the female brownish-black all over, with the exception of the upper and under tail-

coverts, which are pure white. The tail is also white, with the exception of the terminal half of the central and the tips of the remaining feathers, which are black. The young bird is described as dull black, the under tail-coverts tipped with dull white, the upper tail-coverts pure white, and the tail black, tipped with white. (References : J. I. S. Whitaker, *The Birds of Tunisia*, I., p. 56; Irby, *Birds of Gibraltar*, p. 41; Colonel Willoughby Verner, *My Life among the Wild Birds in Spain*, p. 289; Bree, *Birds of Europe*, II., p. 89; H. E. Dresser, *Birds of Europe*, II., p. 247; see also König, *J. f. O.*, 1895, Taf. vi. and p. 385.)

N. F. TICEHURST.

# NOTES

## RECOVERY OF MARKED BIRDS.\*

**BLACK-HEADED GULL** (*Larus ridibundus*).—B.B., No. 527, marked as a nestling by Major H. Trevelyan, on an island in Lough Erne, co. Fermanagh, Ireland, on June 14th, 1909. Recovered (shot) on January 22nd, 1910, at Athlone, co. Roscommon, Ireland.

The information of the recovery was very kindly sent to me by Mr. E. Foy.

**DUNLIN** (*Tringa alpina*).—Vogelwarte, Rossitten, No. 462, marked as an adult by Dr. J. Thienemann at Rossitten, Germany, on August 3rd, 1909. Recovered (shot) by Mr. H. Brown, Junr., on December 15th, 1909, near Southend, Essex.

My attention to this was kindly drawn by Mr. T. Hepburn, who forwarded me a newspaper cutting. I communicated with the shooter and Dr. Thienemann, who kindly gave me the above details.

**LESSER BLACK-BACKED GULL** (*Larus fuscus*).—"Country Life," No. 28, marked by the watcher on the Farne Islands in June, 1909. Recovered (found dead) near the Lighthouse Island near Olhao, Portugal. No date given. (See *Country Life*, November 27th, p. 758, and December 11th, p. 857.)

The above record is unsatisfactory, since the dates and other details are wanting. I fear that exact details are not always kept of the rings placed by readers of "Country Life," since "G. P.," the marker of this bird, writes that the bird "would be a Lesser Black-backed Gull. The other birds I put rings on were Puffins." Unless such an inquiry is conducted with strict accuracy it becomes useless and even misleading.

**WIGEON** (*Mareca penelope*).—"1909, R. G.," marked by Sir Richard Graham, Bart., at Netherby, near Carlisle, Cumberland, at the end of February, 1909. Recovered

\* For previous notes on this subject see *supra*, pages 179-182, 219-220, 251-2.

in Mr. W. E. de Winton's duck-decoy at Orielton, Pembrokeshire, on December 13th, 1909.

This ring was kindly forwarded to me by the Editor of the "Field," to whom Mr. de Winton had sent it. On sending the ring to Sir Richard Graham he identified it as one of his, and gave me the above particulars. Sir Richard Graham tells me that he rings each spring many ducks, and finds that a large proportion reared at Netherby return there to breed. Many of these birds must be shot in the winter, and I am hopeful that Sir Richard Graham will in future use a ring with a full address, so that really useful results may be obtained from his marking. At present the want of address has resulted in his hearing of only one other of his ringed birds being obtained at a distance from Netherby, though nearly a thousand have been ringed! It is practically useless to mark birds with a ring bearing an insufficient address. Few people will take the trouble to communicate to the papers regarding such a ring, and even if the recovery is notified to a newspaper the chances of the record being seen by anyone who recognises the mark are slender. I have now information regarding the recovery of the following birds insufficiently marked, and should be greatly obliged if any reader can help me in discovering by whom they were marked:—COMMON SNIPE, marked (metal band) 112.1906; WOODCOCK, marked (brass ring) H.H., 1907.3; ROCK-DOVE, marked (aluminium ring) W. B., 20.1908.

H. F. W.

#### ADDITIONS TO THE BOOTH MUSEUM.

THE authorities in charge of the Booth Museum at Brighton have recently issued, under the editorship of Mr. A. F. Griffith, a supplement to the third edition of the "Catalogue" of the collection. This consists of a description of a few of Booth's birds that were not included in that edition, together with a considerable list of additions made to the collection during the last fifteen years. Chief among these are the Borrer and Monk collections purchased in 1901 and 1905 respectively, and the collection of the late Bishop Wilberforce presented by his son in 1903. These three collections are all rich in local Sussex birds, and contain many of the rare and unique specimens recorded in Borrer's "Birds of Sussex." Several of these specimens had already been mentioned in the third edition of the "Catalogue," but others do not appear to have been elsewhere recorded, and so were not included in the serial paper of "Additions" published in

Vols. I. and II. of our Magazine. The most important appear to be as follows:—

**GREAT REED-WARBLER** (*Acrocephalus turdoides*). An adult male, shot by George Bristow in a brickpit at St. Leonards on September 12th, 1906.

**ORTOLAN BUNTING** (*Emberiza hortulana*). A female at Castle Hill, near Rottingdean, Sussex, on April 21st, 1896; and a male near Eastbourne, on June 29th, 1898. Recorded as obtained in 1896 in third edition (1901), and as 1898 in the supplement (1909).

**BEE-EATER** (*Merops apiaster*). An adult male, shot at Burwash, Sussex, on June 5th, 1905. This is said to have been one of three seen together. Another is recorded as having been shot at Dallington on May 31st (*cf. antea*, vol. 1, p. 282); and another as having been seen at Brightling about the same time.

**CENTRAL EUROPEAN BARN-OWL** (*Strix flammea flammea*). Three specimens of this form with the dark brown underparts are recorded, viz.:—One caught in a barn at Shoreham, Sussex, on October 24th, 1893. A second killed at Rottingdean in November, 1900; and the third obtained at Shoreham in September, 1901. It will be noticed that these were all obtained on the south coast in autumn.

**GOSHAWK** (*Astur palumbarius*). An immature female, shot by G. Sargent at Hooe, Sussex, on November 19th, 1904.

**RED-FOOTED FALCON** (*Falco vespertinus*). An immature male, shot at Hooe, Sussex, by George Sargent, on April 15th, 1899.

**LITTLE CRAKE** (*Porzana parva*). An adult male, caught by a dog at Pevensey, Sussex, on May 7th, 1904 (*cf. vol. 2, p. 129*).

**BAILLON'S CRAKE** (*Porzana bailloni*). One caught in a net on the Downs above Brighton on September 2nd, 1894.

**NIGHT-HERON** (*Nycticorax griseus*). An immature female, shot near Lydd, Kent, on October 30th, 1906 (*cf. vol. 1, p. 348*).

**LEVANTINE SHEARWATER** (*Puffinus yelkouanus*). Shot by Booth in the Firth of Forth, Scotland, on August 19th, 1874. This specimen apparently remained unrecognised until recently when it was identified by the late Howard Saunders.

N. F. TICEHURST.

THE EASTERN PIED WHEATEAR (*Saxicola pleschanka*  
(Lepech.)) IN SCOTLAND.

A NEW BRITISH BIRD.

ON October 19th, 1909, while the Misses Evelyn V. Baxter and Leonora Jeffrey Rintoul were engaged in migration work on the Isle of May in the Firth of Forth, they noticed a Wheatear, which appeared "considerably darker than *S. œnanthe*, looked smaller and seemed to show less white patch on the rump when it flew; it was restless and rather wild," but was eventually secured. Mr. W. Eagle Clarke and Dr. E. Hartert have identified the bird, which is a female, as the Eastern Pied Wheatear, *Saxicola pleschanka* (Lepech.) = *S. morio*, Hemp. and Ehr. The wind was in the west at the time and had been blowing previously lightly from the east, and there was not much movement of birds in progress.

The above details of this most interesting discovery are condensed from an article by the discoverers in the "Annals of Scottish Nat. Hist." (1910, pp. 2-4), where a nice coloured figure of the bird by Miss L. Medland is also given.

The range of the Eastern Pied Wheatear is given by Mr. Dresser (*Man. Pal. Birds*, p. 32) as Cyprus, and from the Crimea and lower valley of the Volga east to Kashmir, south-eastern Siberia, Tibet, Mongolia, and northern China, wintering in N.W. India, Abyssinia and Arabia, and occasionally in Gilgit. It has also occurred in Italy and Heligoland. The bird occurring in Cyprus is, however, decidedly a distinct form (*S. pleschanka cypriaca*, Hom.), and possibly in other parts of its range distinct forms may be recognised, as a series of specimens reveals much difference in plumage other than seasonal, although Dr. Hartert, we are told (*Ann. S.N.H.*, 1910, p. 3), considers the white-throated form (*S. vittata*, Hemp. and Ehr.), to which the specimen in question belongs, to be merely a variety of *S. pleschanka*.

The Misses Rintoul and Baxter thus describe their capture, which is a female:—

"It is 5.7 inches in length, wing 3.6 inches. Head dull greyish-brown with faint indications of darker streaks; eye-streak buffish-white; ear-coverts brownish-black, much streaked with greyish-brown; mantle black, each feather broadly margined with greyish-brown, lighter at the tips; rump and upper tail-coverts white; central pair of tail feathers black with basal third white, remaining tail-feathers white broadly tipped with black, the outer ones more so than the inner; primaries, secondaries, and wing-coverts blackish-brown with narrow pale brown margins; sides of the neck white tinged with buff; throat and centre of abdomen white; chest warm buff; flanks and under tail-coverts pale buff; axillaries black; under wing-coverts black, with paler edges; eyes, bill, feet, and toes black."



In summer-plumage the female is generally darker brown on the upperside, the greyish-brown edgings having worn off, and in many specimens the throat is buffish-brown in winter and mottled with black in summer.

The male in fresh autumn-plumage has the smoky-white feathers of the crown and nape fringed with greyish-black and the black feathers of the mantle fringed with buffish-brown; the black wing-feathers and coverts edged with buffish-white; the chin, throat and ear-coverts black, the feathers with small buff tips. In other respects the plumage much resembles that of the female. In summer the male becomes greyish-white on the crown and nape and an intense black on the back, wings and throat, through the wearing off of the tips of the feathers.

H. F. W.

### THE GREENISH WILLOW-WARBLER AS A BRITISH BIRD.

It will be remembered that in Vol. II., p. 408, we quoted Mr. W. Eagle Clarke's verdict (*cf. Ann. S.N.H.*, 1909, p. 114) that the second recorded British example of the Greenish Willow-Warbler (*Phylloscopus viridanus*), viz., the bird obtained at the Suleskerry Lighthouse, on September 5th, 1902 (*cf. Bull. B.O.C.*, XIII., p. 12; *Ann. S.N.H.*, 1903, p. 22), had proved to be after all an example of Eversmann's Warbler (*P. borealis*). It seemed doubtful then whether the first (and now only) British example of *Phylloscopus viridanus*, viz., that obtained by Mr. G. H. Caton Haigh, on September 5th, 1896, had been correctly identified. In order to clear up any doubt in the matter, Mr. Caton Haigh has very kindly sent me this bird for examination, and I find that it is an undoubted example of *Phylloscopus viridanus*.

If a Willow-Warbler with one or two wing-bars is found in the British Isles it is certain to be a rare visitor, but the species to which it belongs should not be decided by this character. The wing-bar in the Greenish Willow-Warbler is formed by the tips of the greater wing-coverts being yellowish-white. Eversmann's Warbler has a similar wing-bar, and very often (but not always) an ill-defined second wing-bar which is formed by the tips of some of the median wing-coverts also being of a yellowish-white. It will be readily understood that these tips to the feathers are liable to become worn off when the plumage is abraded, and therefore they would be an unreliable character in some stages of plumage, even if they were not variable.

There need, however, be no more difficulty in distinguishing the two species in question than the Chiffchaff and Willow-Warbler, since their wing-formulæ (and especially the length

of the first primary) are perfectly different. As this is not set out in Saunders' "Manual." I give it below:—

GREENISH WILLOW-WARBLER ( <i>Phylloscopus viridanus</i> )	EVERSMANN'S WARBLER ( <i>Phylloscopus borealis</i> )
PRIMARIES.	PRIMARIES.
1st ( <i>i.e.</i> , bastard) 7 to 8 mm. longer than primary-coverts.	1st ( <i>i.e.</i> , bastard) seldom a shade longer, generally equal to, sometimes shorter than, primary-coverts.
2nd equal to the 7th or between the 7th and 8th (occasionally slightly shorter than the 8th and rarely a shade longer than the 7th).	2nd slightly longer than 6th, <i>i.e.</i> , between 5th and 6th (very occasionally slightly shorter than 6th).
2nd to 5th inclusive sloped off on the outer web, and the 6th sloped off towards the tip.	2nd to 5th inclusive sloped off on the outer web.
4th longest, 3rd and 5th slightly shorter.	3rd longest, 4th slightly shorter, 5th shorter than 4th.

I should mention that Mr. Caton Haigh had noticed the length of the bastard-primary and had always felt sure that his bird was correctly identified.

H. F. WITHERBY.

#### "GREY-HEADED WAGTAIL."

ON page 257 of Vol. III. of BRITISH BIRDS I find recorded a male of the "Grey-headed Wagtail (*M. flava viridis*)" from Romney Marsh.

This nomenclature is incomprehensible and misleading. Probably the Scandinavian form with a dark grey, almost and often quite slate-coloured, head is meant, but the name "Grey-headed Wagtail" for this form is ill-chosen, because it is much better applied to the Mediterranean *Motacilla flava cinereocapilla*. Moreover, the name *Motacilla viridis*, Gmelin, cannot be used. It is based on Fig. 2, Plate 23, of Brown's "Zoology." That figure depicts a bird from Ceylon. It is not correct enough to say to which form of Wagtail it belongs; in fact, Sharpe (see *Cat. B. Brit. Mus.*, X., p. 522) says it is "not recognisable as belonging to a Wagtail at all." Though I think a Wagtail is meant, I agree that it is an inexact figure, and the Scandinavian, or better Northern, slate-headed Wagtail must be called *Motacilla flava thunbergi*, Billberg, 1828. This name has been discovered by Lönnberg (see *Journ. f. Orn.*, 1906, p. 351) and antedates Sundevall's *borealis*, which has generally been adopted for the same.

ERNST HARTERT.

[The English name most often used by authorities for this Wagtail has been, I believe, the Grey-headed. It may be unsuitable, as are other English names, but I do not think it should be altered for that reason; stability should be maintained in English names, it seems to me, as well as in scientific ones. As to the name *viridis*, I take full responsibility for the use of this. The author of the note in question wished to call it *borealis*, but I altered it to *viridis*, for the simple reason that in nomenclature we must follow a standard authority in BRITISH BIRDS, otherwise we should be calling the same bird by half-a-dozen different names. The latest authoritative list is that published by Howard Saunders in 1907 (viz., *A list of British Birds, revised to July, 1907*), shortly before his death. Until this list is supplanted the names there employed must be used in these pages. As to *M. f. thunbergi*, I have no sympathy with the resuscitation of unknown and unused names, and those who ardently search for them could, I consider, be much more profitably employed. A flexible law of priority applied in conjunction with common sense is most valuable, but when priority is insisted upon regardless of every other consideration it becomes a fetish which should be hewn down and destroyed. In 1905, in his "Die Vögel der paläarktischen Fauna" (Heft. iii., p. 291), Dr. Hartert calls this Wagtail *Motacilla flava borealis*, by which name and *M. f. viridis* it has been equally well known. Now, in 1910, Dr. Hartert says it must be called *M. f. thunbergi*, of which no one has ever heard; later we may expect some diligent "antiquarian" to discover some older and equally unknown name. Meanwhile the past history of the bird under the names *viridis* or *borealis* will be lost in the vapour of these unseemly ghosts.—H.F.W.]

#### WATER-PIPIT IN DEVON.

A PIPIT was shot on August 25th, 1904, by Mr. Parr, a gentleman staying at the Staghunters' Hotel, Brenden, Lynton, North Devon, and was sent to me as a Pipit—species unknown. I recognised it as the Water-Pipit (*Anthus spipoletta*), and that was confirmed by Dr. Bowdler Sharpe when I showed it to him at the Natural History Museum on July 13th, 1909.

J. B. NICHOLS.

#### A MARKED HOUSE-MARTIN.

ON July 15th, 1906, Dr. Thienemann, of the Rossitten Observatory, caught on its nest and marked a House-Martin (*Chelidon urbica*: No. 711), which afterwards proved to be a

male. The nest was one of several on the wall of the old Museum-shed at Rossitten. In 1907 these nests were swept away by storm and rain and the colony abandoned. On July 19th, 1909, Dr. Thienemann visited, for marking purposes, a colony which had established itself on a stable about 100 metres distant from the sight of the first. The first bird he caught was this No. 711. Apart from the direct significance of the record, this case is also interesting, because to Dr. Thienemann's knowledge this is the first instance of such a small bird carrying a ring for so long a period as three years. The bird was in no way injured and was in the best of condition, and was going about its nesting duties in the normal way at the time of its re-capture. This case is cited in favour of the foot-rings as against indelible stamps on the feathers of the wing, flat aluminium plates attached to the tail-quills, and other such methods that have been put forward as being less hard on the birds. Such marks are of course lost at the first moult that occurs after marking, and the percentage of returns would be reduced to an extent that would not afford sufficient results to compensate for the labour and expense of marking, and certain sorts of returns would never occur at all. That an aluminium ring is not sufficiently durable to give reliable records bearing on the natural length of life of large birds especially, Dr. Thienemann here admits, but for migration purposes it seems to meet all requirements. The longest time that a ring has been borne by a Rossitten bird is five years seven months eight days (Hooded Crow), and in this case the ring was very much worn. In the case of Herring-Gulls, etc., the rings appear to wear more quickly, probably owing to constant friction with wet sand and so on. Dr. Thienemann remarks that a ring fitting closely to the leg of a bird is less liable to friction and therefore more durable than one which is free to slide up and down (*cf. Ornith. Monatsberichte*, Oct., 1909, pp. 150-2).

A. LANDSBOROUGH THOMSON.

#### BREEDING-HABITS OF THE SISKIN IN IRELAND.

HAVING had a very extensive acquaintance with the breeding-habits of the Siskin (*Chrysomitris spinus*) in co. Wicklow for ten years, commencing with 1886, as well as in other parts of Ireland, the notes of Mr. Hamilton Hunter on this subject (*antea*, pp. 188, 189) interested me very greatly. I have, however, little doubt that a wider experience will prove that the Siskin often nests much earlier than he supposes, as I have found very many nests in April, and have proved beyond

doubt that the eggs are sometimes deposited before the end of March. It is, in fact, the earliest of the finches to breed in Ireland. In 1886 I did not obtain eggs, although I found nests in May, and in the following year was disappointed, if also greatly interested, to find a Siskin's nest with five young several days old on April 29th. A short time after I was compensated by finding several other nests, two of which I took, with five eggs each. In 1889 I found two nests on April 9th, one of which contained three eggs, and was at a height of twelve feet in a spruce, while the other was only partially built, and was about fifteen feet from the ground in the end of a lower branch of a big Scotch fir. The hen bird always gathered her materials at some distance, and flew with them direct to the nest, accompanied by her mate, which sang and twittered gaily, but took no part in building or collecting materials. These consisted of green moss from tree-trunks or from the ground, and sometimes small twigs from the tree-tops. On April 19th I took this nest, with four eggs, which with the parent birds, forms one of the well-known series in the Natural History Museum at South Kensington. Another nest, taken two days later, was fifty feet from the ground in a thick spruce-fir, and quite invisible from below. On April 15th, 1893, I found a Siskin's nest near the top of a spruce, with four young about three days old, leaving no doubt that in this case the clutch was complete by the end of March.

In my experience clutches of five eggs are quite usual, and more than one-third of those mentioned by Mr. H. Hunter are of that number, so that it is difficult to understand why he calls such clutches the exception. I consider five nearly as common as four, but have never seen a completed clutch of three. It is curious that I, too, have noticed antagonism between this bird and the Chaffinch when building, though I have observed the Siskin stealing materials from the Chaffinch's nest, and not *vice versâ*. I have found Siskins' nests in conifers exclusively, the following being the order of frequency: spruce, Scotch fir, larch, Douglas fir, deodar, silver fir. I have found the nests at various heights from ten to fifty feet or more, generally near the end of a lateral branch, but in several cases at the top of a tree, against the leader and resting on the small side branches. Although the nest is often quite invisible from the ground, the bird's habit of flying direct to it, twittering loudly meanwhile, often leads to its discovery. In fine genial weather in the breeding-season the Siskin is remarkably joyous and lively, its song and clear call-notes forcing it on the observer's notice; but if the weather be

cold or stormy very little will be seen of the bird. This may partly account for Mr. Hunter's want of success in finding the early nests. Mr. Ussher's observations agree closely with my own. He mentions a case of a young brood which had quitted the nest, being seen on April 29th.

ALLAN ELLISON.

### CROSSBILLS NESTING IN NORFOLK.

ON January 12th, 1910, a workman walking home along the railway line near Thetford, Norfolk, saw a Crossbill feeding young. He threw a stone at them, killing the old bird and one of the nestlings; two other nestlings were taken alive, and he is now trying to rear them; they were shown to me last night in his cottage. The nest was in a Scotch fir close to the line, and not more than 20 feet from the ground. On January 18th I saw a flock of twelve within a mile of the same spot, and to-day (January 14th) a pair some two miles distant. I am sending the dead Crossbill.

HEATLEY NOBLE.

Since writing, the two young ones have died, and I now enclose them too.

H. N.

[The young birds were almost fully fledged, but traces of down still adhered to the crown and rump-feathers, and only the faintest traces of the crossing of the beak were to be noticed. The breeding-season of this species is so extraordinarily variable that it is scarcely surprising to find that a few birds breed even in mid-December in a country where the winter is open and mild as compared with Scandinavia. Thus in Styria, Hanf found two nests with eggs on January 30th. Brehm states that it has been recorded as having eggs or young in every month of the year, even in December, and that he has seen birds in full moult feeding young, laying and pairing! In Denmark eggs have been found from January to May: Dr. Rey says the breeding-season extends from December to June; while in Bavaria young have been found in the nest in September. Mr. Noble tells us that a nest with four eggs, far advanced in incubation, was found on January 29th, 1907, in west Ross-shire. The usual breeding-time in the British Isles is, however, from the end of February to the beginning of April.—EDS.]

## IRRUPTION OF CROSSBILLS.\*

**BEDFORDSHIRE.**—A flock of over fifty on August 1st, 1909, at Sandy (*J. Steele Elliott*). “Since writing to you in December (*cf. supra*, p. 260), I have seen Crossbills almost every day that I have been in the large woods on our estate (Woburn)” (*The Duchess of Bedford, in litt.*, January 16th, 1910).

**BERKSHIRE.**—Small flocks still (December 31st, 1909) at Temple Combe (*Heatley Noble*).

**BUCKINGHAMSHIRE.**—Flock of about thirty on December 30th, 1909, at Fawley Court (*Heatley Noble*).

**GLOUCESTERSHIRE.**—Small flock (six or seven) on January 9th, 1910, near Cirencester (*Collingwood Ingram*). Twelve seen on December 5th, 1909, amongst larches at Rodborough, Stroud (*E. N. Witchell, Field*, 25, xii., 1909, p. 1173). They breed near Stroud every year (*M. L. Ridgway, t.c.*, 8.1.1910, p. 74). Flocks of fifteen to twenty still (January 20th) to be seen at Mitcheldean (*N. F. Richardson*).

**HAMPSHIRE.**—Two on January 3rd, 1910, at Holmsley, near Ringwood (*H. F. Witherby*). Two or three on November 15th, 1909, and January 1st, 1910, at Airdridge, near Botley (*Lady Jenkyns*). Two pairs on January 16th on the Beaulieu Manor, near Brockenhurst (*H. Noble*). Six or seven on July 19th-20th, 1909, at New Milton; the same morning “my neighbour Mr. C. C. Dallas, who lives on the southern border of the New Forest, reported a flock in his garden”; two on October 9th and four on October 25th, flying over towards the Forest; several small flocks on November 16th, near Netley Hospital; four or five on November 17th, in Talbot Woods, near Bournemouth; flocks in varying numbers from November 18th to December 8th, at New Milton; two on December 29th, flying over Brockenhurst Park (*R. E. Coles*).

**HEREFORDSHIRE.**—About forty to fifty on January 19th, 1910, at Ledbury (*Heatley Noble*).

**HERTS.**—Flock of eighteen on January 2nd, 1910, feeding in some tall pines at Broxbourne (*M. Harris*). Three (two males, one female) on January 2nd in a larch tree between Rickmansworth and Chorley Wood Common (*H. R. Leach*). About a dozen on November 21st, 1909, at Watton (*Rev. Allan Ellison*). Six or seven early in October, 1909, and four or five more on December 18th,

\* For previous references to this subject, *cf.*, pp. 82, 123, 162, 190-194, 226-228, 258-261.

and more since, near Welwyn (*Katharine Acland*). Three on January 20th, 1910, several small parties on January 22nd, fifteen to twenty on January 24th near Berkhamstead (*C. M. Dyer*).

- KENT.—Nine seen on December 31st, 1909, flying in a north-westerly direction, low down, between Langton Green and Tunbridge Wells; a flock of eight at Langton House on January 15th and 16th, 1910 (*Miss E. L. Turner*). A flock of about thirty since the early part of July, 1909, until at all events December 17th, near Boxley, near Maidstone (*Rev. J. R. Hale*).
- NORFOLK.—About six in August, 1909 (*cf. supra*, p. 260), and later increased to forty or fifty and now (January, 1910) "they abound in all suitable spots in the immediate neighbourhood" of Swaffham (*Rev. E. T. Daubeny*). About a dozen at the end of October, 1909, at Pickenham, near Swaffham (*B. B. Riviere*). A large flock during last week of July, 1909, at Castle Rising, and another flock from about the beginning of October to the middle of December at the same place (*N. Tracey*).
- NORTHUMBERLAND.—About fifty made their appearance on December 24th, 1909, in Dipton Woods, near Corbridge-on-Tyne. Nearly every winter Crossbills visit these woods, but they are more numerous than usual this year (*J. S. T. Walton*).
- SHROPSHIRE.—Eight on August 6th, 1909, and small parties on September 4th, 5th, 12th, 29th, October 1st, 2nd, 9th-12th, 15th, 18th, 21st, November 7th, 11th, 12th, 16th, 28th, and December 5th at Dowles (*J. Steele Elliott, MS. note-book, per H. E. Forrest*).
- SUFFOLK.—Two on November 3rd and three on November 15th, 1909, at Icklingham. Small flocks near Herringswell since the end of October until the middle of December (*W. Farren*). Quite a dozen have been sent (January, 1910) for preservation to Bury St. Edmunds from Lackford and Icklingham. Larch-cones had been worked at, on January 11th, at Elmswell (*Rev. Julian G. Tuck*).
- SURREY.—Flock of about twenty on November 12th, 1909, and some on November 15th, at Walton-on-Thames (*Rev. Allan Ellison*).
- SUSSEX.—After an absence of about two months they reappeared in the Hastings district during the third week in November, 1909, and were seen in large flocks at



Ore, and at Westfield, for about three weeks (*N. F. Ticehurst*). A party, varying from six or eight to eighteen or twenty, from November 4th to December 6th, 1909, at Uckfield; three on January 13th, 1910, and four on January 14th at same place (*R. Morris*). One on December 5th, 1909, and two about a fortnight before at Eastbourne (*E. C. Arnold*).

WILTSHIRE.—Small flock on December 17th, 1909, at Littlecote, and another small flock three or four miles away, on December 18th (*Heatley Noble*).

SCOTLAND.—With reference to the record from Inverness (p. 261), Mr. R. H. W. Leach informs us that Crossbills are present with them nearly all the year round, and breed. Mr. Eagle Clarke gives the following information (*Ann. S.N.H.*, 1910, p. 54) additional to that which has already been recorded (*supra*, p. 190): At *Fair Isle* the Crossbills were in greatest abundance on July 10th, when they were in large flocks. These flocks, however, appear to have at once broken up, for after this date, though plentiful, the visitors were in scattered parties, and were abundant down to August 26th. Later they became gradually scarcer; in September only two or three were seen, and the last seen on the island was an immature male on October 2nd. During their sojourn they frequented all parts of the island: the faces of the great cliffs, the cultivated land, the grassy slopes, and the high bleak, heathery ground. On the latter they fed on the unripe fruit of the crowberry; elsewhere on seeds of grasses and other plants, and on the heads of thistles. Very many of these visitors, however, perished, for numerous dead or dying birds were found in the plots of potatoes. At the *Flannan Islands* the last of the invaders was observed on September 22nd. Mr. Francis G. Gunnis has informed Mr. Clarke that they were very plentiful at Gordonbush, in east Sutherland; and adds that many were caught in the nets protecting strawberries.

Mr. Clarke remarks that the paucity of records from the mainland of Scotland is to be explained by the fact that the birds failed to attract notice in the Highland forests, where there are great numbers of native Crossbills (*i.e.*, *L. c. scotica*).

ISLE OF MAN.—On August 14th, 1909, Mr. M. McWhannell saw eight Crossbills feeding on larch-cones at Glenduff,

between Ramsey and Sulby, Isle of Man. Mr. McWhannell writes me that he judged them to be two adult birds and six young. Some days later, Mr. McWhannell did not find them, and has seen none since. Crossbills have in various years been seen, and even suspected of breeding, on the line of wooded hills where Glenduff is situated (*P. C. Ralfe*).

IRELAND.—Many were seen near Fassaroe, Bray, in July and early August, 1909 (R. M. Barrington, *Irish Nat.*, 1910, p. 13). About June 30th, 1909, one was captured on the extreme west coast of Connaught ("G. W.," *Field*, 8.1.1910, p. 74).

H. F. W.

### AN OVERLOOKED RECORD OF THE TWO-BARRED CROSSBILL IN SCOTLAND.

THE fact that Saunders in the second edition of his "Manual" (Pt. 6, April, 1898) makes definite mention of only one occurrence of the Two-barred Crossbill (*Loxia bifasciata*) in Scotland, namely, an adult male shot on North Ronaldshay, in the Orkneys, on June 18th, 1894, has led to the supposition that up to that time there was no other authentic record from north of the Border (see BRITISH BIRDS, Vol. II., p. 423). It may, therefore, be well to point out that Mr. George Bolam recorded in the "Annals of Scottish Natural History" for April, 1897, p. 86, that he had examined a specimen shot in Staneshiel covert, Bunkle, Berwickshire, on December 19th, 1889. It was in the company of Common Crossbills, and was originally recorded as a male of the American White-winged Crossbill (J. Barrie, *Proc. Berw. Nat. Club*, XII., Pt. 3, 1890, p. 532).

It may, I think, be safely assumed that the "White-winged Crossbill" (male) shot near Jedburgh, Roxburghshire, in February, 1841, and recorded by Archibald Jerdon in the first volume of the "Zoologist" (p. 221), would also belong to the European form; and the same may be said of the two shot by Saxby in Unst on September 4th, 1859, and described in his "Birds of Shetland," 1874, p. 115.

WILLIAM EVANS.

### SNOW-BUNTING IN DORSET.

My friend, Captain Portman, records (*supra*, p. 262) the occurrence of a specimen of the Snow-Bunting (*Plectrophenax nivalis*) on the edge of Poole Harbour in October, 1908, and

concludes his valuable note with the remark, "I cannot find any record of a Snow-Bunting in Dorset since 1846 (Mansel-Pleydell)." A reference, however, to page 41 of the late Mr. L. C. Mansel-Pleydell's "Birds of Dorsetshire," which was published in 1888, though, unfortunately, not dated, shows that the only years actually specified by him for the occurrence of the Snow-Bunting in Dorset are 1844, 1868, and 1869, the two last being long subsequent to "1846," which, indeed, he does not mention at all. Captain Portman, together with others who study the birds of this county, will doubtless be interested to learn that Mr. Mansel-Pleydell himself chronicled the fact that a Snow-Bunting was shot at Kimmeridge, which is in south-east Dorset, on November 29th, 1895 (*cf. Proc. Dors. N. H. and A. F. Club*, xvii., 199 (1896)).

EUSTACE R. BANKES.

IN connection with this subject I may note that on December 2nd, 1891, I shot a solitary specimen—a male in autumn plumage—of the Snow-Bunting on the shores of Poole Harbour.

H. W. MAPLETON.

#### LITTLE OWL IN STAFFORDSHIRE.

IN the article on the spread of the Little Owl (*Athene noctua*) (Vol. I., p. 335) only one record of the species in Staffordshire is given, and I am not aware of any subsequent occurrence; it may therefore be of interest to record an adult specimen (sex unknown) which was shot at Lichfield on November 27th, 1909, and preserved by Messrs. Bettridge and Son, of Birmingham, at whose shop I examined it.

A. J. LEIGH.

[There are also one or two records from Burton-on-Trent on the borders of Staffordshire and Derbyshire; one was shot there on March 13th, 1909.—F.C.R.J.]

#### MONTAGU'S HARRIER IN KENT.

A MONTAGU'S HARRIER (*Circus cineraceus*) was shot on November 18th, 1909, near Folkestone. Colonel Montagu said he had never known of a Montagu's Harrier in England later than October.

P. VERNON DODD.

[A specimen is recorded as having been shot at Staplehurst on November 10th, 1892. *Cf. "Birds of Kent,"* p. 266.—Eds.]

#### GREENLAND FALCON IN CO. ANTRIM.

ON December 16th, 1909, a male Greenland Falcon (*Falco candicans*) was obtained near Larne, co. Antrim, and brought

alive to Messrs. Sheals, the local taxidermists, where I had the pleasure of examining it. The bird, evidently suffering, was mercifully chloroformed, and is now being mounted. It is an immature bird; its stomach contained some feathers and bones of a Skylark. This constitutes the third record for the county.

WM. C. WRIGHT.

#### RED-FOOTED FALCON IN CAMBRIDGESHIRE.

A FINE adult male Red-footed Falcon (*Falco vespertinus*) passed through my hands in May, 1909. It was shot in Cambridgeshire.

WM. FARREN.

#### BITTERN IN SUSSEX.

A BITTERN (*Botaurus stellaris*) was put up by my son on the Crumbles, Eastbourne, on December 21st, 1909. Though he had his gun with him he wisely forebore to shoot the bird, which I hope is still at large.

H. P. MOLINEUX.

#### GLOSSY IBISES IN HUNTINGDONSHIRE, IRELAND AND YORKSHIRE.

ON October 21st, 1909, I received a Glossy Ibis (*Plegadis falcinellus*) in the flesh from Holywell, on the Ouse, near St. Ives, where it was shot while flying very high a day or two before. It was a male, in good condition, and as there were a few dirty white feathers in the head and neck I presume it was immature, although it had distinctly glossy plumage, which Howard Saunders says immature birds have not. Possibly this bird with *glossy plumage*, and light feathers in head and neck, is an adult in winter-plumage.

WM. FARREN.

DR. R. Archer Nesbitt writes me that a Glossy Ibis (*Plegadis falcinellus*) was shot on the 15th of October, 1909, in a swamp at Ballyfrenis, near Donaghadee; my correspondent also states, "Sex unknown; the neck was more or less speckled with grey feathers"; it is presumed therefore that it was an immature bird.

This constitutes the second record for the county, the first having been obtained in September, 1906, near Belfast, on the co. Down side of the Lough.

WM. C. WRIGHT.

Two Glossy Ibises were shot on the Lambwath in Holderness, Yorkshire, one (unsexed) on October 19th, and the other (male) on November 10th, 1909; both were immature. Another was seen but escaped. (E. W. Wade, *Nat.*, 1910, p. 28.)

## THE LONGEVITY OF BIRDS.

IN connection with this subject, which was discussed at some length in our pages a little while ago (*cf. antea*, pp. 78-79, 115-117), Mr. Theed Pearse writes to me that he knows of a Goldfinch which has been in captivity for thirteen years, and of a Common Buzzard (now in the possession of Mr. H. W. Finlinson) which has been in captivity for eighteen years. Mr. S. E. Reffitt informs me of a Rough-legged Buzzard which has recently escaped and been shot after having been in captivity for fifteen years.

H. F. WITHERBY.

UNSEASONABLE NESTING.—Mr. Stanley Pashouse informs us that a Wood-Pigeon had young just fledged on November 25th, 1909, at Torquay, and Mr. A. L. Thomson informs us that a perfectly fresh Starling's egg, found on the ground at Old Aberdeen, was brought to him on November 25th. Mr. E. W. Wade reports (*Nat.*, 1910, p. 28) that a Rook was feeding young on November 27th at Leconfield, and that Starlings were feeding a young one (four others were dead in the nest) on November 29th at Sutton (Yorks).

SHORT-EARED OWLS BREEDING IN YORKSHIRE.—In the Yorkshire Naturalists' Union Report for 1909, Mr. E. W. Wade records (*Nat.*, 1910, p. 41) that six nests of *Asio accipitrinus*, containing from four to eight young each, were discovered in June, 1909, on Broomfleet Island, in the Humber saltings.

BLACK-TAILED GODWITS IN CO. CORK.—Mr. Robert Warren records (*Zool.*, 1910, p. 34) that a small flock (nine or ten) of *Limosa belgica* visited Cork Harbour in December, 1908, and that "this season" another small flock visited "our south coast," one being shot near Youghal Harbour, and about a dozen being seen several times in October off Blackrock.

GREAT SKUA IN IRELAND.—A male adult *Megalestris catarrhactes* was shot near Portrush, co. Antrim, on October 24th, 1909, after a north-east gale (W. J. Williams, *Irish Nat.*, 1910, p. 13).

LAPLAND BUNTINGS IN NORFOLK.—Mr. B. Dye records (*Zool.*, 1910, p. 34) that a specimen of *Calcarius lapponicus* was caught near Great Yarmouth, on October 15th, 1909, and that two others have been reported. The bird is an annual visitor to Norfolk (*cf.*, vol. 1, pp. 249-250).

HONEY-BUZZARD IN NORFOLK.—A "specimen" of *Pernis apivorus* is reported (B. Dye, *Zool.*, 1910, p. 34) as having been obtained in the second week of October, 1909, at Haddiscoe, near Great Yarmouth.



# REVIEWS

*A History of the Birds of Kent.* By Norman F. Ticehurst, M.A., F.R.C.S., F.Z.S., M.B.O.U. LVI. pp. + 568 pp. 24 full-page illustrations and two maps. Witherby & Co. 21s. net.

CONSIDERING the importance of Kent from an ornithological point of view, it is remarkable that no history of the avifauna of the whole county should have been published until quite recently. In 1907 two books dealing with this subject were reviewed in these pages, but until the appearance of the present volume we were still awaiting a really exhaustive history of the birds of Kent. For the past sixteen years Dr. N. F. Ticehurst has been working at this subject, and the volume which he has just completed cannot fail to take a high place among the published works on the avifauna of the counties of England.

A county avifauna must necessarily be largely a work of compilation, but the labour of collecting notes, great though it undoubtedly is, cannot be compared with the task of sifting these notes and verifying each individual record. In this Dr. Ticehurst has been particularly successful. Great care has been taken to trace specimens of rare birds as they passed from collection to collection, and as an instance of this we may call attention to the account of the first known British example of the Icterine Warbler. Obtained at Eythorne, near Dover, and recorded by Plomley in 1848, this bird passed from one collection to another, until between the years 1872-74 it was partially destroyed by fire, but was carefully treasured for another ten years, after which it unfortunately disappeared (pp. 52, 53). Another of the many interesting results of Dr. Ticehurst's personal attention to local museums is the discovery that Kent produced the earliest known British specimen of the Levantine Shearwater (p. 552).

Kent will always be associated with three species of birds first made known to science from specimens obtained within its boundaries. These are the Dartford Warbler, Kentish Plover, and Sandwich Tern, and of these three full and most interesting accounts are given in the volume before us. Although the Dartford Warbler has become extinct as a breeding bird in the county, the Kentish Plover is holding its own, and not only so, but of late years has steadily increased in

numbers as a breeding bird on Dungeness Beach. This increase is entirely due to the protection afforded by the Royal Society for the Protection of Birds and by Mr. Finn, of Lydd. In 1905 the Society provided a watcher and Mr. Finn a keeper to patrol the beach during the breeding season, so that at the present time, in spite of the cupidity of "collectors" of "British taken" eggs of the Kentish Plover, this interesting species is able to rear its young in safety, a state of things previously impossible since it was first discovered just over a hundred years ago. We are told (p. 421) that dogs were trained to hunt for the eggs of this bird, and that Yarrell knew of this fact in 1833. Such a custom seems to have been followed so lately as 1901, for in that year the present writer saw a small black spaniel used for the purpose on the Kent side of the "Midrips."

The account of Kentish Golden Orioles is most interesting and satisfactory, and it is pleasant to read that the owners of land on which the species occurs and breeds appreciate the presence of this handsome bird and do their best to protect it.

Dr. Ticehurst tells us that the eggs of the Reed-Warbler (*Acrocephalus streperus*) were first described from specimens taken at Dartford (p. 55), and the fact that the Ring-Ouzel has bred at least on one occasion in Kent is satisfactorily proved (p. 15). We are glad to learn that the Bearded Tit has been seen in Romney Marsh as recently as 1904 (p. 75), though this is not altogether surprising, as there is little doubt that from time to time a few pay an occasional visit to a certain locality in Sussex. That Puffins formerly bred in the Dover cliffs is not generally known we believe, but that such was the case is fully substantiated (pp. 534, 535).

We are quite in agreement with the decision that records of the nesting of the Arctic Tern based on a supposed difference between the eggs of this species and those of the Common Tern, and on birds seen on the wing, cannot be accepted.

The author is evidently unaware that a pair of adult Red-necked Phalaropes was shot on the Hoppen pits in May, 1905, and that Temminck's Stint has occurred on the south coast of Kent since 1899, an example having been obtained at Littlestone on August 1st, 1906. We venture to think that some reference to "Godwit Day" should have been made. According to the local fishermen and shooshooters May 12th is "Godwit Day," for it is said that on this date the Godwits first arrive on the coast.

Some fifteen species of birds first added to the "British List" from specimens obtained in Kent are fully commented

on. The notes on the *Anatidæ* are full of interest, and the author's personal observations have resulted in the discovery of the Garganey as a breeding species in Kent. Did space permit we should have liked to call attention to many more most interesting points in this book.

We are glad to see that sub-species are fully recognised in this volume and that the author designates them by trinomials, but more uniformity in the headings would have been desirable; for instance, both forms of Bluethroat and all the sub-species of Blue-headed Wagtails are given capital headings, whereas the Northern Willow-Warbler and the Continental Redbreast and Goldcrest are given small headings only.

As the author states in his preface that "it has been considered advisable to overstep the strict geographical boundary of Kent in one particular, namely, by the inclusion of the whole of Romney Marsh so far as the east bank of the river Rother," we do not see the necessity of square brackets for the Tawny Pipit (p. 104). The actual boundary between Kent and Sussex on the south coast is at or about the west of the Midrips—near Jews Gut or Jewries Gap, which we notice the author calls Jury's Gap.

The reproduction—by photography—of the original plates of the Dartford Warbler, Kentish Plover and Sandwich Tern, all of which were originally drawn from the type specimens, are of far more interest than coloured plates would have been, and the photographs of typical haunts of Kentish birds are of importance.

The copious notes on migration are a special feature in the present work, and they are of the utmost importance, considering the position of the county.

A bibliography is printed at the beginning of the book, and an excellent coloured map is bound in at the end. Although containing just over six hundred pages, the volume is very light and handy and the type throughout is excellent.

Having read every page of this book, we confidently recommend it as a "last word" on the *status* of the Birds of Kent up to the present time, and as such it adds considerably to our knowledge of British birds. We feel sure that all those who are interested in British birds—and they are many—will join with us in congratulating Dr. Norman Ticehurst on the result of his many years of careful work.

M. J. N.



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# BRITISH BIRDS

AN ILLUSTRATED MAGAZINE  
DEVOTED TO THE BIRDS OF  
THE BRITISH ISLES

MARCH 1,  
1910.

Vol. III.  
No. 10.



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ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., W. P. PYCRAFT, A.L.S.,  
M.B.O.U., AND NORMAN F. TICEHURST, M.A., F.R.C.S., M.B.O.U.

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## TWO RACES PECULIAR TO THE BRITISH ISLES.

BY

ERNST HARTERT, PH.D., M.B.O.U.

I. *Accentor modularis occidentalis*, subsp. nov.\*

The British Hedge-Sparrow.

A COMPARISON of twenty English specimens of the Hedge-Sparrow with thirty from the Continent of

\* Prazák, "Ornith. Monatschrift," 1896, p. 189, proposes a name for a supposed British race of the Hedge-Sparrow, making the following

Europe shows that the two forms are easily distinguishable. As they lie on the table in two rows, one sees at a glance that the British race is darker in colour: the throat and chest are of a somewhat darker grey, the abdomen is less whitish, the flanks slightly darker, so that the brown stripes are less evident. There is no constant difference in the colour of the upper surface, though generally it is not so bright, less rufescent than in continental, especially Swedish, specimens. These slight colour-differences are more marked in the males, less apparent in the females. Besides these differences in colour some structural ones are much more striking: the bill is in most cases thicker, more powerful in the British birds; the structure of the wing is different: the second primary is only slightly longer than the seventh, *i.e.*, about 1 to 3 mm., mostly only 1 to 2 mm., and sometimes no longer, but equal to the seventh. This is obvious in every specimen before me, with the exception of one from Spurn Head, shot on September 7th, 1882, by the Rev. H. H. Slater; this specimen also being rather pale on the underside, there can be no doubt that it is a migrant, probably from Scandinavia or Denmark.

In *Accentor modularis modularis*, on the other hand, the second primary is much, *i.e.*, from 4 to 6 mm. and even 7 mm., longer than the seventh, which is more obviously shorter than the sixth. The wings of all the continental Hedge-Sparrows which I have examined agree in this

remarks (translated):—" *Accentor modularis* (L.). In the literature I find very little about the rather interesting climatic variation of this species, which becomes browner and browner proceeding eastwards from England to Japan, so that the very light British birds might perhaps be opposed as a special subspecies, which could be called *slateri*, to the more brownish continental, and especially the much more rufous Japanese form *rubidus*." Unfortunately, however, the British form is not lighter, but darker in colour, and therefore it is very doubtful if the late Dr. Prazák had ever seen a specimen, having made the above remarks before his sojourn in Edinburgh. As his writings have been proved to be full of inaccuracies—the unfortunate author invented stories, persons, collections and species—this may account for his erroneous statement, which is rendered worse by the assertion that Bohemian Hedge-Sparrows often resemble almost completely the picture of *rubidus* in the "Fauna Japonica."

respect, with the exception of one from the Pyrenees and one from Sardinia. The latter is a winter bird and may possibly have come from anywhere, but the Pyrenean bird was shot in May, and must be a native of its place; it is also rather dark, but being in worn plumage and dirty, the latter point is insignificant. Other Pyrenean examples agree with continental examples.

After these explanations I do not hesitate to separate the British Hedge-Sparrow under the name *Accentor modularis occidentalis*. It is probably restricted to the British Isles, but it may also inhabit the western parts of France, especially Normandy and Brittany, whence I have not seen specimens, but an adult male which I obtained eleven years ago on the rocks in the sea near Herm, Channel Islands, though in somewhat worn plumage and with damaged wings, appears to me to be a typical *occidentalis*.

The type of *A. m. occidentalis*, from Tring, is preserved in the Rothschild Museum.

The name "*Curruca Eliotae*" Leach, "Syst., Cat. Indig. Mamm. and Birds in the Brit. Mus.," p. 24 (1816), though used for an English specimen, is a *nomen nudum* without any description whatever, and the only two other synonyms of *Accentor modularis* refer to continental specimens.

## II. *Pratincola torquata hibernans*.

### The British Stonechat.

For years I have been aware of the fact that British Stonechats have the edges to the feathers of the upperside of a darker and more reddish rufous colour than continental examples, and I have occasionally discussed this with some of my colleagues, but, not being fond of naming new forms unless I have been able to study more or less thoroughly all the allies, I have never troubled about it. When working out the genus *Pratincola* for my book on the Palæartic birds, however, I recognised

the necessity of separating the British form, and I have done so in a review of the genus *Pratincola*, in the "Journ. f. Orn." (1910, pp. 171-182). There I have named the British race, on p. 173, *Pratincola torquata hibernans*. Why not *P. rubicola hibernans*? Because, as I have explained in the article mentioned above, *P. rubicola* is nothing but a northern race, or geographical form, of *P. torquata* from south and south-west Africa. *P. torquata* was named by Linnæus (*Syst. Nat. Ed.*, XII., p. 328) first, *P. rubicola* (*t.c.*, p. 332) afterwards. Therefore, as I go by strict priority in nomenclature, I must call the South African race *P. torquata torquata*, the Central European one *P. torquata rubicola*, and not the former *P. rubicola torquata*, and the latter *P. rubicola rubicola*.

Our British bird thus becomes *P. torquata hibernans*. It differs from *P. torquata rubicola* not only by the more rufous look of the upperside, but also by the brighter, more chestnut colour of the under-surface, especially the breast. It is very strikingly different in fresh autumn-plumage, but worn summer birds are not easy to recognise, though, as a rule, much more of the rufous edging to the feathers remains on the back, and the flanks are usually darker.

*P. torquata hibernans* is, as every British ornithologist knows, mainly a resident bird, while on the Continent *P. torquata rubicola* is chiefly migratory.

I have not been able to find differences between British and Central European examples of *Pratincola rubetra*. This is not strange, because the latter is a strict migrant and remains in Great Britain less than six months. With the exception of the two Wagtails—and *M. lugubris* is also often resident, only wandering short distances in hard weather—all forms peculiar to the British Isles are resident or chiefly resident.



## ON THE NESTING OF THE HOBBY IN HAMPSHIRE.

BY

COMMANDER H. LYNES, R.N., M.B.O.U.

IN the south of Hampshire, there occur at intervals along the base of the South Downs, concealed by the folds of the hills, and beyond the ordinary rounds of the keeper and woodman, small, uncared-for woods, solitudes where



THE HOBBY'S WOOD.

Green and Spotted Woodpeckers revel among the whitened tree-trunks that intersperse the foliage of the living beeches and conifers, where owls, hawks and Crows hold sway-supreme over smaller fur and feather, and one may hear the rippling cry of the Stone-Curlew on the flint-strewn down above.

In one of these woods, on the 11th of July, 1909, we flushed a Hobby (*Falco subbuteo*) from the very ancient nest of a Crow, about two-thirds of the way up a tall silver-fir.

The nest, merely cleaned up a little and not added to, now contained two Hobby's eggs of a poorly-marked Kestrel-type, evidently much incubated. It was pouring with rain, which may have accounted for the fact that during the two and a half hours we remained near the nest there were no further signs of either of the owners. The behaviour of the birds when we visited the nest on subsequent occasions was very different, for when we



Diagram to show apparent sexual difference in size and wing-contour of the Hobby.

approached the nesting-tree both birds would circle high overhead, uttering their Wryneck-like cry, occasionally descending to settle on a "stag-horned" tree-top near by; but when one of us climbed the tree to the nest, the female bird would make a series of terrific swoops straight at the intruder's head, swerving upwards at the last moment to clear by a few feet only.

Some hours of observation of the two birds flying overhead, on different occasions, convinced us that besides the difference in size of the two sexes, there was a decided difference in contour of wing between them: that of the male was very pointed, the posterior edge having an apparently uninterrupted curve from the tip of the outer primary inwards, whereas that of the female presented a more rounded appearance, the four or five

outer primaries being separated at their tips and the posterior contour then falling away rather abruptly to the general curve of the remainder. The accompanying diagrammatic sketch will explain.



The Hobby's nest with two young a few days old,  
as viewed from an adjacent tree.

(From a sketch by Commander Lynes.)

Whether sexual difference in wing-contour is a constant feature in these falcons, such as has been stated of the Lapwing, or was merely an individual peculiarity of this particular pair of birds, is a question perhaps best referred

to those who keep trained falcons, or who have access to a large number of specimens collected from the same part of the world.

At our second visit, on July 18th, the nest contained two downy, white young ones, barely two days out of the shell; a week later again they were still in the same garb, and we placed migration-rings on their legs. Eight days later (August 8th) the wing- and tail-feathers were about two-thirds grown, the facial feathering nearly complete, and the soft feathering of the ventral pteryla had begun to appear through the white down with which the nestlings were otherwise still clothed. Thirteen days later, on August 21st, we found the nest empty, but it was evident from the actions of the parent Hobbies that the young were close at hand. It will thus be seen that the time in the nest was approximately thirty days.

Remains of food at the nest, on various occasions were few, they included several beetle-castings, the wing of a Wheatear, and the leg and foot of an adult Swift; the latter an eloquent tribute to the grand wing-power of these attractive little falcons.

We have reasons for believing that these Hobbies nested here the previous year also, and shall hope for their return next summer.

## SEQUENCE OF PLUMAGES IN BRITISH BIRDS.

III.—THE BLACK-THROATED THRUSH, BLACKBIRD  
AND RING-OUZEL.

BY

C. B. TICEHURST, M.A., B.C., M.R.C.S., M.B.O.U.

BLACK-THROATED THRUSH. *Turdus atrigularis*, Temm.

DOWN-PLUMAGE. Not examined.

JUVENILE PLUMAGE. Acquired whilst in the nest, the Down-Plumage being completely moulted.

Whole *head* and *hind-neck* grey-brown; *mantle* and *scapulars* grey-brown, the feathers with dark terminal bars and mesial longitudinal markings of greyish-white, broader on the scapulars; *lower-back*, *rump* and *upper tail-coverts* ochreous-grey, with terminal greyish-white markings to the feathers; line from base of bill and *superciliary* buffish-white; *chin* dull white; *lores* very dark brown; *moustachial streaks* brownish-black and well defined; *cheeks* dull white, the feathers tipped with dark brown; *ear-coverts* very dark brown, the feathers with pale shaft-lines; *upper-throat* dull white, with very few small blackish spots; *lower-throat* and *breast* pale buffish-white, the feathers tipped with roundish blackish spots, smaller on the *breast*; *belly* and *flanks* dull white, with a few scattered dark terminal bars to some feathers; *under tail-coverts* pale buffish-white, with dark bases, which are hidden; *tail-feathers* greyish clove-brown, with an olivaceous tint to the webs of the central pair, and the outer pair browner than the rest, especially noticeable on the undersurface; *primaries* and *primary-coverts* sepia-brown, with paler edges to the outer webs; *secondaries* sepia-brown, with buffish edges to the outer webs and usually pale tips to the two innermost; *greater coverts* greyish-brown, with broad buffish edges to the outer webs and pale tips, and in some specimens small mesial terminal streaks; *median coverts* greyish-brown, with terminal buffish triangular markings; *lesser coverts* greyish-brown, with mesial buffish streaks and tips; *under wing-coverts* pale rust-colour; *axillaries* rather paler.

N.B.—Before this plumage is moulted the buff markings on the *coverts* become greyish-white and the *ear-coverts* become paler brown.

FIRST WINTER-PLUMAGE. Acquired by a complete moult, with the exception of the rectrices, remiges, primary-coverts and a variable number of the greater coverts (usually the innermost three or four are moulted).

MALE. Whole *head* dark smoke-grey, the feathers with darker centres; *hind-neck*, *mantle*, *scapulars*, *rump* and *upper tail-coverts* dark smoke-grey; an indistinct *superciliary* of blackish feathers, with greyish margins; *lores* blackish; *ear-coverts* dark smoke-grey; *chin* whitish; *cheeks* and *whole throat* brownish-black, the feathers with rather broad dull white edges and tips, giving the whole a mottled appearance; *breast* black, the feathers tipped with greyish-white; *belly* dull white streaked

with smoke-grey, sparsely in the centre, heavier at the sides; *flanks* smoke-grey; *under tail-coverts* with concealed dark bases to the feathers and broad whitish margins and tips tinged with orange; *tail* as in the Juvenile Plumage, but the olivaceous tint is now greyish; *remiges* and *primary-coverts* as in the Juvenile Plumage, but much of the buff edging on the secondaries is now greyish; *greater coverts* as in the Juvenile Plumage, but the margins paler and the new three or four innermost feathers lacking the pale tips; *median* and *lesser coverts* dark smoke-grey; *under wing-coverts* rusty-orange; *axillaries* paler, with greyish margins.

N.B.—There is some individual variation in the tint of the *upperparts*, in the pureness of the black of the *breast* and in the predominance of black or white on the *throat*.

FEMALE. Whole of *upperparts* as in the male, but slightly browner; *lores* dark brown, surmounted by a dusky line passing into an indistinct *superciliary*; *ear-coverts* as mantle; *cheeks* and whole *throat* dull white, with mesial dark brown streaks; *upper-breast* smoke-grey, with dark brown mesial markings of varying dimensions (in some the dark brown colour occupies most of the feather, in others it is merely a streak); *lower-breast* and *belly* dull white, more streaked than in the male; *rectrices*, *remiges* and all their *coverts* as in the male.

N.B.—There is considerable variation in the amount and arrangement of the dark markings on the *throat* and *breast*.

FIRST SUMMER-PLUMAGE. Acquired by abrasion and fading.

MALE. Whole of *upperparts* a shade paler grey, especially on the *rump*; through the loss of the edgings of the feathers the black *superciliary* is more pronounced, and the whole *throat* and *breast* is more uniformly black, though in most the edgings on the *throat* are not entirely lost and so the latter is still somewhat mottled; the streaks on the *belly* are less pronounced and some of the greyish edgings on the *secondaries* and edgings and tips on the *greater coverts* are worn off.

N.B.—Before this plumage is moulted the black on the *underparts* has become brownish-black.

FEMALE. Whole of *upperparts* paler grey; the dark markings on the *underparts* are browner and more sharply defined; some of the greyish edgings on the *secondaries* and edgings and pale tips of the *greater coverts* are worn off.

ADULT WINTER-PLUMAGE. Acquired by a complete moult.

MALE. Differs from the First Winter-Plumage in having the *upperparts* as a rule a shade paler, the *superciliary* more definite, *lores* blacker, *chin*, whole *throat* and *breast* black, with narrower whitish edgings, the *greater coverts* without pale tips to any of the feathers and the grey margins of the outer webs not so broad.

FEMALE. So great is the variation in the females that it would appear that there are no distinctive features between the First Winter- and Adult Winter-Plumages, except that in the latter the *greater coverts* have narrower grey margins to the outer webs and lack the pale tips.

**ADULT SUMMER-PLUMAGE.** Acquired by abrasion and fading.

**MALE.** Differs from First Summer-Plumage by having the *upperparts* slightly paler, the *superciliary* more definitely marked, the *chin*, whole *throat* and *breast* black, with, as a rule, no whitish margins left.

**N.B.**—Before this plumage is moulted the black of the *underparts* has become brownish-black.

**FEMALE.** Cannot with certainty be distinguished from First Summer-Plumage, except where a few specimens in the latter plumage still have some of the pale tips to the *greater coverts* not yet worn off.

### BLACKBIRD. *Turdus merula*, L.

**DOWN-PLUMAGE.** Greyish-white. *Distribution*—Inner supra-orbital, occipital, humeral, spinal and ulnar (*cf.* Vol. II., p. 189).

**JUVENILE PLUMAGE.** Acquired whilst in the nest, the Down-Plumage being completely moulted.

**MALE.** Whole *head*, *hind-neck* and *mantle* very dark brown, the feathers having rufescent centres and darker margins; *scapulars* very dark brown, with broader mesial rufescent streaks; *lower-back*, *rump* and *upper tail-coverts* dusky blackish brown, the latter having mesial streaks and edges of rufous and the *rump* faint mesial rufous streaks; indistinct *superciliary* formed by rather paler feathers than the rest of head; *ear-coverts* very dark brown, with whitish or rufescent shaft-lines; *moustachial streak*, *chin* and *upper-throat* rufescent or buffish-white, with brown terminal markings, heavier on the first two; *lower-throat* and *breast* rufescent feathers, heavily tipped with brownish-black; *belly* pale rufescent to dirty white, the feathers faintly tipped with brownish-black; *tail* brownish-black; *primaries*, *secondaries* and *primary-coverts* brownish black; *greater coverts* very dark brown, with pale rufescent tips to all and mesial terminal streaks of rufescent on the inner ones (these streaks are smaller or obsolete on the outer ones); *median* and *lesser coverts* brownish-black, the feathers with a broader rufescent streak ending in a tip of the same colour; *under wing-coverts* pale rufescent.

**N.B.**—There is considerable variation in the amount of the mesial streaks on the *upperparts* and in the general colour and amount of dark markings on the *underparts*.

**FEMALE.** Resembles the male, but has the feathers of the *upperparts* rather browner, *tail* very dark brown, *remiges* sepia-brown, washed on the outer webs with an olivaceous tint.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the *rectrices*, *remiges*, *primary-coverts*, and a varying number (usually the outer half) of the *greater coverts*.

**MALE.** Whole of *upper* and *underparts* brownish-black, some feathers having, especially on the *mantle* and *belly*, faint brownish edgings; *tail* as in Juvenile Plumage; *primaries*, *secondaries* and *primary-coverts* as in Juvenile Plumage, but the outer webs browner, due to wear; *greater*

*coverts*, outer half as in Juvenile Plumage, but the tips are slightly worn; inner half brownish-black; *median* and *lesser coverts* brownish-black.

**FEMALE.** Whole of *upperparts* dark umber-brown, there being an olivaceous tint on the *rump* and *upper tail-coverts*; *lores* dusky, and above them a faint dusky line; *ear-coverts* dark brown with whitish shafts; *chin* dull white; *checks* and *upper-throat* dull white, with mesial streaks and broad tips of dark rufescent-brown to the feathers (heavily marked on the former, more scanty on the latter); *lower-throat* and *breast* rufescent-brown, the feathers with variable and not pronounced dark tips shading off to dusky-grey towards the *belly*; *belly* dusky-grey, with pale edgings to the feathers, shading off to slate-brown on the *vent*; *flanks* slate-brown, with a rufescent tint; *under tail-coverts* slate-brown; *rectrices*, *remiges* and *primary-coverts* as in the Juvenile Plumage; *greater coverts*, the outer ones (usually outer half) as in the Juvenile, but the tips slightly worn; the inner ones, which are new, olivaceous-brown; *median* and *lesser coverts* olivaceous-brown; *under wing-coverts* and *axillaries* dusky-grey, with a faint rufescent tinge.

N.B.—Great variation in the amount of rufescent and dark markings on the *underparts* exists in the female.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion and fading.

**MALE.** Resembles the First Winter-Plumage, but the brown edgings to the feathers where present on the *upper* and *underparts* is worn off, and the *remiges* and *coverts* are a shade paler.

**FEMALE.** Resembles the First Winter-Plumage, but is a shade paler on the *underparts*, *remiges* and *coverts*.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

**MALE.** Whole of *upper* and *undersurface* glossy black; *remiges*, all the *coverts* and *rectrices* blacker than in First Winter-Plumage.

**FEMALE.** Differs from First Winter-Plumage in having the whole of the *upperparts* darker, and the dark markings on the *upper-throat* mostly lacking the rufescent tinge; the *lower-throat* and *breast* on the whole darker and not so rufescent; the grey of the *belly* darker; *flanks* lacking the rufescent tinge and being dark slate-brown, with an olivaceous tinge; the *rectrices*, *remiges*, *median* and *lesser coverts* blacker, and all the *greater coverts* darker olivaceous-brown.

N.B.—There is very great variation in the markings on the *underparts* in shape, definition and number.

**ADULT SUMMER-PLUMAGE.** Acquired by the same processes as the First Summer-Plumage.

**MALE.** Differs only from the Adult Winter-Plumage by the edges and tips of the feathers being worn and by the *remiges* and *rectrices* having a browner tint. Differs from the First Summer-Plumage by the darker *remiges* and *rectrices* and by all the *coverts* being black.

**FEMALE.** The breast is slightly less rufescent than in Winter-Plumage and differs from the First Summer-Plumage in the same points as Adult Winter-Plumage does from First Winter-Plumage.



RING-OUZEL. *Turdus torquatus*, L.

**DOWN-PLUMAGE.** Pale buffish-grey. *Distribution*—Inner supra-orbital, occipital, humeral, spinal and ulnar.

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

**MALE.** Whole *head* and *hind-neck* brown-black, the feathers with slight ochreous-brown tint at the tips, some having a faint whitish mesial streak; *mantle*, *lower-back*, *scapulars* and *rump* brown-black, with a whitish mesial streak to the feathers and faint ochreous-brown edgings, narrow on *mantle*, broader and more pronounced on the *scapulars*, faint on the *rump*; *upper tail-coverts* brown-black tipped with faint ochreous-brown; *ear-coverts* brown-black, with central pale streaks; *cheeks* buffish-white, heavily tipped with brownish-black; *chin* buffish-white, the feathers tipped with brownish-black; *upper-throat* buffish-white, the feathers flecked to a variable amount with brownish-black; *lower-throat* very dark brown feathers, tipped with ochreous-brown and irregularly marked with whitish at the bases; *breast*, *belly* and *flanks* barred with very dark brown and white or buffish-white; *under tail-coverts* brownish-black, with mesial whitish streaks, and tipped with buffish-white; *tail* brownish-black, with rather paler edges to the outer pair; *primaries* and *secondaries* grey-brown, paler on the margins of the outer webs, especially on the *secondaries*, where these are greyish; the two innermost *secondaries* having also whitish tips to the outer webs; *primary-coverts* like the primaries; *greater coverts* grey-brown, with pronounced greyish edges and tips to the outer webs, the innermost three or four have a short subterminal mesial whitish streak (variable, absent in some, faint trace in others); *median* and *lesser coverts* dark brown, with prominent whitish mesial streak and tipped with buffish-brown; *axillaries* dull white, mottled with grey; *under wing-coverts* grey-brown, edged and mottled with white or buffish-white.

**FEMALE.** Resembles the male, but the whole *upperparts* browner in tint.

**N.B.**—There is considerable variation in the amount of buff or whitish on the *breast*, and in the mesial streaks and ochreous-brown edgings on the *mantle*.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the rectrices, remiges, the primary-coverts and the outer four or five greater wing-coverts.

**MALE.** Whole of *head*, *hind-neck*, *mantle*, *scapulars*, *back*, *rump* and *upper tail-coverts* brownish-black, with pale edges and tips of buffish-grey to the feathers on the *head*, grey elsewhere; *ear-coverts* brownish-black, faintly edged with buffish-grey; *chin*, *upper-throat* and *cheeks* blackish-brown, the feathers tipped and edged with greyish-white; feathers of the *lower-throat* and *sides of throat* form a broad gorget of dull white tipped to a variable amount with smoky-brown; *breast*, *belly* and *flanks* brownish-black, the feathers edged and tipped with greyish-white, the amount being slightly variable; *under tail-coverts* brownish-black, with pronounced edges and tips of greyish-white; *rectrices*, *remiges* and *primary-coverts* as in the Juvenile Plumage; *greater coverts*, the inner three or four dark grey, with pale

grey edges to the outer webs, and there is no mesial streak, the outer four or five are browner in tint than the inner ones and have slightly worn tips, and some show a faint trace of a mesial streak, but this is variable.

FEMALE. Like the male, but the *upperparts* a shade browner, and the edgings of the feathers as a rule rather broader; the greyish-white edges and tips of the feathers of the *throat* are broader, giving the whole a more mottled appearance; the narrower *gorget* is a dark smoky-grey, more broadly tipped with smoky-brown than in the male, and so has the appearance of being absent; *breast*, *belly* and *flanks* slightly browner and more broadly tipped and edged with greyish-white.

FIRST SUMMER-PLUMAGE. Acquired by abrasion and fading.

MALE. Whole *uppersurface* dark brown; *chin*, *upper-throat*, *ear-coverts* and *breast* dark brown, *gorget* dull white; *belly* and *flanks* dark brown, with a few traces of the grey-white margins of the feathers still left; *under tail-coverts* as in winter, but some of the grey-white edges are worn off; *tail* browner; *wing-coverts* browner, with most of the grey edgings and tips worn off.

FEMALE. Whole of *upperparts* are browner than in Winter and most of the edgings are gone, as they also have from the feathers of the *throat*, and so the latter has a less mottled appearance; the *gorget* now stands out, and is of a smoky-grey, but there are still some edgings of smoky-brown left; *belly*, *flanks* and *under tail-coverts* browner, and the grey-white edgings reduced in width or in places vanished.

ADULT WINTER-PLUMAGE. Acquired by a complete moult.

MALE. Resembles the First Winter-Plumage, but in some the *gorget* is whiter and the edgings to its feathers are narrower. *All the greater coverts* are now dark grey, with greyish-white edges to the outer webs, and so no trace of a mesial streak is seen on any of them.

FEMALE. Resembles the First Winter-Plumage, but the *gorget* is more distinct, due to the feathers having narrower edges; there is also the same distinction in the *greater coverts* as there is in the male.

ADULT SUMMER-PLUMAGE. Acquired in the same way as the First Summer-Plumage, and the majority of specimens cannot with certainty be distinguished.



# NOTES

## THE WOOD-PIGEON "DIPHThERIA."

IN our issue for December last (p. 214) we asked our readers' co-operation in a third enquiry into the Wood-Pigeon disease. A schedule was affixed to the cover of each copy of that issue, and it was asked that our readers would fill up the schedule with all the observations made up to the middle of March. We particularly request *every* reader to fill up the schedule, whether Wood-Pigeons have been numerous or *not*, or whether the disease has been present or *not* in his district.

EDS.

## STRICTEST PRIORITY IN NOMENCLATURE.

IN the last number of BRITISH BIRDS (p. 299) the Editor wrote a note against strict priority in nomenclature. Needless to say I do not agree with him. For twenty years I have earnestly considered the question of nomenclature in ornithology, and have discussed it at various annual meetings of the German Ornithological Society and at two Congresses, and I have, perhaps, written more long and short articles on the question than any other living ornithologist, though most of them may not have been read by British birdmen, being written in German. The gratifying result of my endeavours is that strictest priority is now generally adopted and followed not only in America—where it was done before—but also in Europe. "Nomenclature" is a necessary evil. Experience has shown that only one way leads out of the present uncertainty and instability (compare Seebohm's, Saunders', Dresser's, and Sharpe's works on British and European birds!), viz., strict priority. Nobody can deny that we must once reach finality if the oldest name is used without exception. That this end is speedily approached is evident to all who want to see it, thanks to the exertions of those who have the means and literary knowledge to examine the rights of early names. The Editor of BRITISH BIRDS considers that their energy "could be much more profitably employed," but I think that men like Professor Lönnberg, Hellmayr, Richmond, Oberholser, myself and others know themselves best how to employ their time. Mr. Witherby does not do a good service to the memory of our deceased friend

Howard Saunders by commemorating his errors in names for British birds. It is much better to help the advocates of strict priority in their earnest endeavours to approach, and finally reach, stability in nomenclature, than to make new rules, such as following the names of "latest lists of British birds." In this case Mr. Witherby's proposal is particularly unfortunate, as Saunders, although the foremost authority on British birds, was not an authority in nomenclature, and this is merely a technical nomenclatural question. I have no objection to Mr. Witherby using the name "Grey-headed Wagtail" for the Scandinavian Yellow Wagtail, if this is the adopted English name, but he can never hope that he will be followed in the use of the wrong name, "*Motacilla flava viridis*." When I wrote the account of the palæarctic Wagtails in 1905, I was not aware of Billberg's book, which was then hardly known, though in 1906 Professor Lönnberg made it sufficiently known to all ornithologists. It is only a clever *captatio benevolentiae lectorum* for his system that Mr. Witherby suggests: "later we may expect some diligent antiquarian to discover some older and equally unknown name." If there is a still older name it will doubtless soon be discovered, but if there is none, such a thing can, of course, not happen.

If the rule is adopted, that the names of the latest list of British birds are to be used in writings on British birds, the same rule should apply to European, African, and American birds. We would then have the result that in mentioning a species in articles on British, European and African or American birds perhaps three different names are adopted! If, on the other hand, the oldest name at present known is adopted we shall have one name instead of several for the same bird, and if a still older one is discovered it will equally be used in all writings. This example shows the impossibility of following Mr. Witherby's proposal. It would suffice if only articles on British birds were written, but it is necessary that the same bird should be called by the same name by everyone at the same time, and not that a nomenclature should be used which may take the fancy of this or that writer on British birds.

ERNST HARTERT.

[VERY little consideration will show that in this magazine it is necessary to follow a standard in specific names which is readily accessible to all our readers, the majority of whom are not professed systematists. There is no such work, so far as I know, which gives the specific names of all the birds on the British list according to the system of strict priority, even

if we were disposed to adopt that system, and we are not inclined to give here the synonymy of each name used, as would otherwise be necessary. Howard Saunders' work is the latest authoritative list known to the majority of our readers, and the nomenclature there employed is based upon the B.O.U. list (admittedly out of date).

In deciding which of two or more names often used for a bird should be adopted the priority law is necessary and most beneficial, but when such an obscure name as *thunbergi* is adopted for a well-known bird simply and solely because it was the first name proposed, and the other well-known names under which the whole history of the bird has been recorded are discarded, then in my opinion the law is unwisely interpreted and becomes mischievous, in that the useful past is disregarded or obscured for the sake of the useless past, which it would have been far better to have left in its obscurity. Although Dr. Hartert is seeking to safeguard the future, the frequent effect of the rules he has adopted is to have regard for nothing but the beginning of things. Thus it seems to me that the history of the Song-Thrush has been altogether obscured for the future because by Dr. Hartert's code we are to call the Redwing *Turdus musicus*. If a "law" must be interpreted in such a way as to cause in its application such a mischievous result as this, is it worthy of being upheld?—H. F. WITHERBY.]

## RARE BIRDS IN IRELAND.

### SNOWY OWL (*Nyctea scandiaca*).

A female, in almost adult plumage, was shot at Belmullet, co. Mayo, on January 4th, 1910.

### GREENLAND FALCONS (*Falco candicans*).

A male and female were shot on Tory Island, co. Donegal, on December 9th and December 30th, 1909. An immature female was shot at Achill, co. Mayo, on November 29th, 1909; the stomach contained the remains of a Blackbird; another Falcon was seen but not obtained. A female was shot at Belmullet, co. Mayo, on January 20th, 1910, and was probably the bird seen on Achill. Its stomach contained the remains of a Teal. The first recorded capture for the east coast was a male shot, feeding on a Wood-Pigeon, near Greystones, co. Wicklow, on January 12th, 1910. A female was shot near Tralee, co. Kerry in the middle of February.

SPOONBILL (*Platalea leucorodia*).

A specimen in dirty and abraded plumage was shot near Dingle, co. Kerry, on December 22nd, 1909.

HYBRID *Anas boscas* × *Anas strepera*.

A beautiful male hybrid between a Mallard and a Gadwall was shot near Kells, co. Meath, on February 5th, 1910.

CORN-CRAKE (*Crex pratensis*).

An example shot at Malahide, co. Dublin, on January 20th, 1910, was probably one of a late brood. The dark brown down showed conspicuously under the feathers; the bird was in good condition but small, its wings were perfect, and it was flushed from the bank of a river.

LITTLE AUKS (*Mergulus alle*).

Several were picked up exhausted during the month of January, 1910, in several counties: Queen's Co., cos. Sligo, Tipperary, Mayo and Galway.

W. J. WILLIAMS.

## ACTIONS OF THE ALPINE ACCENTOR.

I RECENTLY watched an Alpine Accentor (*Accentor collaris*) in Switzerland, and noticed particularly that it ran and did not hop. My companion, a good observer, agreed with me. I was therefore surprised on looking up the bird later in Howard Saunders' "Manual" to see that he says: ". . . it undoubtedly *hops* and does not run, as some writers have asserted. . . ."

It is so rare to find an apparent inaccuracy, however slight, in the "Manual" that it would be interesting to know what others who know the Alpine Accentor have observed.

F. RUSSELL.

[The bird may possibly both walk and hop; the Hedge-Sparrow certainly hops when it wishes to traverse any considerable space, but it undoubtedly frequently moves short distances by putting one leg before the other and progresses by a walk rather than a run.—H. F. W.]

## BREEDING-HABITS OF THE SISKIN IN IRELAND.

IN reply to the Rev. Allan Ellison's letter in the February number of BRITISH BIRDS (p. 300) I wish to say that I never questioned the fact that the Siskin bred in April; I have seen Siskins feeding young early in May, for several years past, near Dungarvan, co. Waterford; all these were April layings.

I stated that my notes applied only to North Wicklow, and it was this local and interesting fact that I was anxious to record. The editors omitted a sentence from my original note in which I excepted the Coolattin and Powerscourt districts. Mr. Ellison, I believe, collected Siskin *data* mainly from Coolattin Woods, Shillelagh and Deer Park, Powerscourt districts, and would naturally hasten to point out a seemingly grave error on my part. My note applies only to north of Rathdrum, through Lard, Annamoe, Roundwood, and Luggala; and I am confident only a small percentage of Siskins had full clutches in April for some years past in these localities, whose elevated and exposed situations may account for later breeding dates, and also for fewer clutches of five. Mr. Ellison is right regarding the silence of the Siskin in stormy and cold weather; but it would have been quite impossible for close observers to have overlooked young broods following their parents during the beautiful Mays of 1908-09.

In my former note I recorded five clutches of threes in 1909, three of these were undoubtedly full layings (nest containing two young and one addled egg was inspected twice when it contained three eggs). Mr. Ellison during his ten years experience never found a completed laying of three.

R. HAMILTON HUNTER.

### IRRUPTION OF CROSSBILLS.\*

THE observations from correspondents received up to the date of going to press seem to show that the Crossbills are becoming less numerous, though there appears to be no evidence as to the route they are taking if they are leaving the country. It is to be hoped that our readers will make still closer observations, and I should like not only to have all records of the presence of Crossbills and their numbers, but also further evidence of their absence from or diminution in districts where they were present, and the dates on which they were last seen. Careful search will no doubt lead to the finding of more nests, but it is of equal importance to discover how and when the majority of the birds leave the country.

H. F. W.

BEDFORDSHIRE.—A flock of about a dozen "lately" in the Great Hayes Wood, near Wellingborough (Rouse Orlebar, *Field*, 27. xi. 1909).

\* For previous references to this subject, *cf.* pp. 82, 123, 162, 190-194, 226-228, 258-261, 303-306.

BERKSHIRE.—Three small flocks on February 7th near Slough, A flock of nine (very wild) on February 21st at Henley-on-Thames (*Heatley Noble*).

CHESHIRE.—Not seen since January 9th at Alderley Edge (*F. S. Graves*).

HAMPSHIRE.—Two single birds during November, 1909, at Langrish, near Petersfield (*C. G. Talbot-Ponsonby*). Flock of sixteen early in January at Brockenhurst (*Mrs. Connell*). One bird flying overhead, February 12th, and two females, February 13th, near Ringwood (*H. F. Witherby*). Five or six on February 13th at Beaulieu (*Heatley Noble*). In considerable numbers from July 20th, 1909, onwards, near Hambledon, but after the first week of August the parties began to get smaller; the birds have, however, been present throughout the autumn and winter, and on February 13th two pairs and two single birds were seen (*Com. H. Lynes*).

HEREFORDSHIRE. — Large flocks seen “lately” in the neighbourhood of Hereford by Mr. A. B. Farn and others (*H. E. Forrest*, February 19th).

HERTFORDSHIRE.—A large flock in the beginning of December, 1909, at Gravel Hill, near Hitchin (*C. G. Talbot-Ponsonby*). A pair on December 18th, 1909, at Welwyn, and a flock of eight on December 28th (*W. Athill*). Five on February 6th at Solesbridge, near Rickmansworth (*H. R. Leach*).

KENT.—A pair on October 25th, 1909, and a flock of eight in the second week of January, 1910, near Maidstone (*J. H. Allchin*). One seen (and evidence of more) on February 12th in north Kent (*J. Beddall Smith*).

MERIONETHSHIRE.—A flock of about twenty-five on June 29th or 30th, 1909, seen by Miss Priestley at Cae Ddafydd, near Penrhyndeudraeth (*G. H. Caton Haigh*).

MIDDLESEX.—A small party on February 4th at Hampstead; they appeared to be birds “on the move” (*Lt.-Col. H. Meyrick*).

OXFORDSHIRE.—Flocks first seen at Cornwell on September 2nd, 1909, and onwards until January, 1910, when their numbers appeared to decrease; the last time they were seen was on February 16th (*F. W. Stowe*).



RUTLAND.—Flock of thirty during first week of February near Uppingham (*J. M. Charlton*).

SHROPSHIRE.—August 26th, flock of about fifty at Ludlow, stayed eight weeks. Smaller numbers seen from time to time up to end of January, 1910 (*J. G. Lang*). Parties from October up to February about Broseley (*G. Potts*). Many parties of about ten from end of October onwards in woods around Wesson (Shifnal) (*W. Marchant*). Some seen in December at Ellesmere (*R. W. H. Hodges*). Two on October 8th at Ruyton, and one on December 27th at the Clive (*C. S. Meares*).

STAFFORDSHIRE.—Still some on January 7th near Stretton Hall, Stafford (*J. R. B. Masefield*).

SUFFOLK.—A pair in larch-trees on February 16th at Bury St. Edmunds (*Rev. J. G. Tuck*). A flock of ten on January 15th near Bury St. Edmunds (*B. van De Weyer*).

SURREY.—A flock of ten on February 12th on Leith Hill (*J. G. Millais*). About a dozen on October 9th, 1909, at Lawbrook; a few December 25th–31st, and a small flock on January 13th, near Shere (*Flora Russell*). One on July 25th, 1909, near Tilford; sixteen to twenty on August 1st near Witley; six on August 8th at Limpsfield, and eight at Oxted; two small flocks on August 21st in the Leith Hill district; six on August 29th at Oxted; two on November 13th at Frensham; twenty-five to thirty on December 12th at Addington, and six at Shirley; eight on December 25th at Limpsfield, and twenty to twenty-five the day following at Oxted (*Howard Bentham*). Several flocks and small parties, forty to fifty birds in all, on February 13th in the Weybridge district (*J. Beddall Smith*).

SUSSEX.—Had I thought left the northern part of St. Leonard's Forest, but I saw a flock of six on January 18th near Horsham (*J. G. Millais*).

WESTMORLAND.—Flock of twenty on February 15th in a larch-wood at Kendal (*J. Watson*). About a dozen on January 13th at Windermere (*D. G. Garnett*).

IRELAND.—Some seen on December 31st, 1909, at Kilderry, co. Donegal (*W. E. Hart, Irish Nat., 1910, p. 34*).

## CEREMONIAL GATHERINGS OF THE MAGPIE.

ALTHOUGH the fact that Magpies are gregarious in winter has been often recorded—Macgillivray seems to be the only considerable British author who omits to refer to the habit—the significance of these gatherings is not well known. From time to time several explanations have been advanced.

The first is that the birds are simply congregated in roosting parties, after the manner of Rooks, Starlings, or Redwings. I cannot think this explanation is a good one, for I have often seen the flocks in the morning, and, what is more important, at no other season than the first six weeks of the year. (It may be remarked in passing that these winter-flocks have little in common with the smaller and better known family-parties of the late summer or early autumn.) Many of the records of winter-flocks contain some mention of the extraordinary noisiness of the birds on these occasions.

The second explanation, which is the one most generally accepted, is that these gatherings are simply parties of migratory birds; but I have not been able to find any published observations in support of this theory.

The true explanation of these remarkable gatherings, although appearing in one of the most widely read scientific books in our language, seems quite to have escaped the attention of ornithologists. Charles Darwin, in his "Descent of Man" (2nd ed., ii., p. 113), quotes the Rev. W. Darwin Fox to the effect that in former years the birds used to congregate from all parts of Delamere Forest to celebrate the "great Magpie marriage." They assembled early in the spring at particular spots, and could be seen chattering, fighting, and bustling and flying about the trees. The whole affair was evidently considered by the birds as of the highest importance.

I have had several excellent opportunities of observing at close-quarters these strange and picturesque ceremonies, and I think it will not be amiss to draw attention once more to this interesting habit of the Magpie.

In February, 1895, in south-east Lancashire, I counted no less than two hundred birds in one flock. I have never seen anything approaching this number since, but in January, 1909, Mr. J. Middleton counted eighty in a wood in Longdendale, Cheshire, and considered the flock to contain at least one hundred birds. In Longdendale, and in the surrounding districts, I have several times encountered gatherings of a score or so in the early part of the year; and I have heard of them so often that I am quite confident these assemblies are annual affairs. In going through the many published

records of Magpie-flocks, a vagueness as to the exact time of the year is noticeable. I have seen both November and December mentioned, but there is the possibility of error due to the observer being unaware of the import of the gatherings.

On January 24th, 1909, while with Messrs. Chadwick and Milne in a small wooded valley in south-east Lancashire, we came across a small party of eight birds, and decided to watch them. They were in the branches of a sycamore, and were jumping about and parading in a most ludicrous manner. It would be impossible to describe in a few words the actions of these birds, but there was no room for doubt as to the real meaning of the function. Although crowded together they were evidently in pairs; one would "show off" to its mate, and when she (?) turned away, he (?) would promptly jump round to be in front of her. Owing to the trim way in which the birds carried themselves (with feathers pressed close to the body) they seemed slimmer, and the legs showed more of the tibiæ, than usual. Every few seconds the head-feathers would be rapidly erected and depressed, and the tail uplifted and opened and closed like a fan—an action that I remember noticing in an amorous Jackdaw. The voices of the birds were markedly different from those of other seasons. Sometimes one of these Magpies would leave the others and take a course through the trees in the wood, but it was always followed by a companion. On these journeys they approached within a few feet of our heads; we were greatly struck by the unexpected grace of flight displayed on their amatory excursions.

An adequate account of the astonishing antics of these birds would take up too much space, but one rather interesting item must be mentioned. On February 7th, a few miles away, I saw a party of ten "holding a meeting" on a low stone-wall near a wood. Although their actions differed somewhat from those of the others, the import was the same. As there were no twigs to spring about in, some of the birds were jumping about the field or the wall, or even hanging like Kestrels a foot or so above the ground in front of their prospective mates. There was a puzzling disparity of colour amongst these birds, and about half of them (the males?) were far whiter than the others. I soon found the reason for this. In these lighter birds the wings were almost entirely hidden by the white feathers of the flanks; and the shoulder-patches, and even the few feathers on the rump, were fanned out to such an extent that the birds looked at first glance almost as white as Gulls—or "male Smews," as I put in my note-book

at the time. I need not lay stress on the importance of this eloquent action.

On February 14th, in Longdendale, I found the flocks (which had been there very large) broken up into pairs or odd birds, all very noisy. Unfortunately, I have been unable to visit a Magpie country this year—such observations as the above can only be carried out where the birds are common. On December 28th and 31st I was at Longdendale, but the birds were not flocking. But Mr. Milne writes me to say that on the 16th of January of the present year he came across a flock in Longdendale, and watched them for a long time. They were behaving in exactly the same way as those we saw the previous year, but his description includes a hint as to the ragged and trailing appearance of these flocks. The birds were gathered in an isolated tree in a wood; every few minutes one would fly away, closely followed by a companion. This went on for a long time, fresh birds constantly coming in pairs to keep up the stock in the tree. The reader who has met with one of these winter-gatherings will thus understand why the flock is such a ragged one. On January 22nd there was a flock of forty near Broadbottom, as another friend informs me. I might add (in reference to Darwin's note), that so far as we know the birds *do not quarrel nor fight*.

Of course there is still need for a very great number of observations in this interesting subject. It is quite without known parallel amongst British birds, for it differs greatly from the performances of the Ruff and the Blackcock. I regret that I have not done justice to these wonderful performances. As "displays" they are quite equal to anything I have seen of the Birds of Paradise now housed at the Zoological Gardens; and as the Magpie is a strikingly handsome bird, it can compete with its not distant relatives even so far as plumes are concerned.

FREDK. J. STUBBS.

#### NESTING OF THE LITTLE OWL IN HAMPSHIRE.

Nor far from Portsmouth, in the side of a hill, there is a large and little-used quarry, well sheltered on all sides, except to the southward. Here, in 1900, a pair of Black Redstarts spent the winter, and a number of commoner species annually nest.

An inspection of the quarry on the evening of the 5th of March, 1909, added a new visitor to the list—the Little Owl (*Athene noctua*), a single bird, which when roused from a pile of fallen boulders at the base of the cliff made off with the

whirring and dipping flight characteristic of the species, and bobbed its disapproval of my intrusion from the top of a neighbouring post. Several searches during April and May failed to reveal the distinguished stranger again, but on June 22nd, after a month's absence from Portsmouth, I again found him near the same part of the quarry. Suspecting a nest, I made a careful search, but could find nothing more than a number of castings and remains of small birds in various holes and corners, until July 3rd, when the single Owl was



LITTLE OWLS IN A QUARRY NEAR PORTSMOUTH.

(From a sketch by Commander Lynes.)

again seen, and I came upon what had obviously been the nest, in a hole twenty feet above the floor of the quarry, and usually occupied by Stock-Doves. Here was a perfect golgotha of "remains," principally those of Starlings, Sparrows and mice, intermixed with fur- and feather-castings—but empty, the bird was not there. On July 16th, for the first time, *two* Owls were seen together, and a Stock-Dove had placed a platform of twigs on top of the Owl's nest

and was incubating two (of her own) eggs. On August 7th there were no less than four Little Owls sitting together on a ledge high up the cliff-face, on August 13th two were seen, and on August 29th and September 17th only one. Subsequent visits in September and onwards showed, not only by the absence of the birds themselves, but also of their castings, that the Little Owls had all migrated elsewhere.

The eggs would seem to have been laid during the first half of May, and the young to have quitted the nest about July 1st, *i.e.*, just before I discovered it.

It was surprising never to hear a single note from these Owls during the whole season, for in Andalusia a May evening is hardly complete without the call of the "mochuelo," and even in the daytime I remember the olive-groves on the banks of the Guadiana resounding with the single flute-like notes when we disturbed Little Owls from their sanctuaries.

H. LYNES.

#### HEN-HARRIER IN THE ISLE OF MAN.

MR. C. KAY, of Peel, has a fine specimen of a male Hen-Harrier (*Circus cyaneus*) in his possession; it is an adult in good plumage, and was shot some time between January and March, 1906, in Ballagaraghan Garey, a boggy hillside, near Ballacraigne. This species has not previously been noticed in Man.

FRANK S. GRAVES.

#### BITTERN IN KENT.

A BITTERN (*Botaurus stellaris*) was shot at Newhythe, near Aylesford, Kent, on November 25th, 1909. I am pleased to say that a police prosecution followed, but the defendant, who pleaded ignorance of the identity of the bird, was let off with the payment of the costs of the hearing.

J. H. ALLCHIN.

#### GLOSSY IBIS IN NORFOLK.

ON December 2nd, 1909, wind W.N.W., force 3, a Glossy Ibis (*Plegadis falcinellus*) was shot between the River Bure and Breydon Broad, and has been added to the collection of Mr. Benjamin Dye, of Yarmouth. Two were also seen at Breydon on August 28th, 1909, by our watcher.

J. H. GURNEY.

## GOOSANDERS IN SURREY.

ON February 14th, 1909, owing no doubt to the severe weather which then prevailed, an adult female or immature Goosander (*Mergus merganser*) appeared amongst the wild-duck frequenting Frensham Ponds. I had an excellent view of this bird from a distance of not more than one hundred yards, for although the majority of duck rose on my approach, the Goosander remained standing near the edge of the ice surrounding the half-acre of water which was still unfrozen.

When again in the locality on March 13th, 1909, I observed another example of this species, and this also was either an adult female or immature bird. On this occasion, although the weather was cold, the ponds were not frozen to any extent, and the Goosander was so excessively wary that I experienced the greatest difficulty in getting within observation distance.

The most recent previous record of the occurrence of *M. merganser* in Surrey appears to be that of an example now in the Frensham Pond Hotel, which was shot in that locality about the year 1885 (*cf.* Bucknill's *Birds of Surrey*, p. 245).

HOWARD BENTHAM.

## LINE OF MIGRATION OF THE SPOTTED CRAKE.

YOUR correspondent's note (p. 266) on two Spotted Crakes being picked up in the same place, presumably at the same time of year, October 10th, within three years, is interesting, in that it shows how well-defined is their line of migration, which is verified in my own experience within a radius of twenty yards on a railway line near Lancaster, as follows:— On October 20th, 1906, an adult; on October 18th, 1899, a complete wing; and in mid-October in a year between 1899 and 1906, another adult bird.

H. W. ROBINSON.

## PECTORAL SANDPIPERS IN SUSSEX.

A MALE Pectoral Sandpiper (*Tringa maculata*) was shot near the Ship Inn, Winchelsea, Sussex, on April 14th, 1909. I examined it in the flesh two days afterwards. A female example of the same species was shot on April 17th, 1909, at the same place, and was seen in the flesh by Mr. L. A. Curtis Edwards.

J. B. NICHOLS.

## BLACK-TAILED GODWITS IN CO. CORK.

I SEE in BRITISH BIRDS for February (p. 309) a note of Black-tailed Godwits having been recorded by Mr. Robert Warren in Cork Harbour in December, 1908. I have just left Cork, where I was quartered for nearly two years. Godwits are fairly plentiful in the harbour from September to May, or later. Doubtless most of these are *L. lapponica*, but I think myself that *L. belgica* occurs fairly often. I identified one for certain on December 6th, 1908. Again, on January 31st, 1909, a flock of about twenty was observed close to Crosshaven by two of my brother officers, and one bird was obtained.

J. W. H. SEPPINGS.

BIRDS ON LUNDY ISLAND.—From some "Notes on the Fauna of Lundy Island," contributed to the "Zoologist" (1909, pp. 441-446) by Mr. B. F. Cummings, the following items may be mentioned:—The Gannet (*Sula bassana*) has become locally extinct; the Great Black-backed Gulls (*Larus marinus*) are reduced to some two pairs; evidence is given to show that the Whinchat (*Pratincola rubetra*) is a summer visitant; the House-Sparrow and Starling have established themselves (the latter in very small numbers) during the last twelve years; and among other breeding species are Oystercatchers, Manx Shearwaters, and Storm-Petrels.

BIRDS OF LOUGH SWILLY.—Mr. D. C. Campbell, in a paper on the "Birds of Inch and Upper Lough Swilly" (*Irish Nat.*, 1910, pp. 17-28), records a remarkable instance of a nest of *Motacilla lugubris* which he found built in an old nest of *Pica rustica* on the top of a high beech-tree. Among the regular winter visitors to the upper part of Lough Swilly and the lands reclaimed from it, Mr. Campbell tells us that Bewick's Swans, Brent Geese, Wigeon and Scaups occur commonly in very large flocks, and that Sheld-Ducks and Shovelers are residents and *breed in increasing numbers*. Of less common occurrence, there are Grey Lag-Geese, Barnacle Geese, Ruddy Sheld-Ducks, Gadwalls, Pintails, Pochards, Golden-eyes, Scoters, Goosanders, Red-breasted Mergansers and Smews. The Quail visited the district in some numbers in 1893, and nests have been found in 1903 and subsequently. The sloblands and reclaimed ground are largely frequented by *Limicolæ*, the Dunlin breeds there, as well as the Common and Lesser Terns, while among the winter visitors are the Grey Phalarope, Little Stint, Ruff, Greenshank, and Black-tailed Godwit, while the Bar-tailed Godwit is common in spring



and autumn and a few remain during winter. An unusual instance is noticed of the Great Black-backed Gull nesting in the grass on the centre of a low flat island formed by a sand-bank. The Slavonian Grebe is a common winter-visitor, and sometimes remains over summer. The storm that strewed Ireland with Fork-tailed Petrels in October, 1891, brought some numbers to Lough Swilly.

SPREADING OF THE JAY IN ULSTER.—“ Jays have of late years been extending their range, and have since 1901 been repeatedly obtained near Navan. Mr. S. Scroope found a nest on June 6th, 1909 . . . in that part of Meath. . . . The further spread of Jays into southern Ulster is evidenced by one sent to Messrs. Williams & Son from Maguire’s Bridge, co. Fermanagh, on the 7th November, 1906; while Major Hamilton, of Castle Hamilton, Killeshandra, co. Cavan, writes to me on November 13th, 1909: ‘For the first time Jays have appeared in the county; one was shot to-day. . . .’” (R. J. Ussher, *Irish Nat.*, 1910, p. 13).

WRYNECKS IN YORKSHIRE.—*Iynx torquilla* is an extremely local bird in Yorkshire, being almost restricted as a breeder to the south of the county. The record of one heard near Ripon on June 8th, 1909 (W. Gyngell, *Zool.*, 1909, p. 467), may therefore be noted, although the bird has been observed so near as Harrogate (*Birds of Yorks.*, p. 270). I may mention that on the Holderness coast, where this bird is said to be an unusual migrant, I saw one on September 14th, 1909.—H. F. W.

LITTLE OWLS IN HERTFORDSHIRE.—Mr. C. G. Talbot-Ponsonby writes to us that *Athene noctua* is now very common round Hitchin.

WHITE-TAILED EAGLE IN THE SCILLY ISLANDS.—Mr. F. W. F[rohawk] records (*Field*, 18. xii. 1909, p. 1100) the shooting of a specimen of *Haliaëtus albicilla* on one of the Scilly Islands on November 11th, 1909. Another example is said to be frequenting the islands.

NOTES ON THE BREEDING OF THE SPARROW-HAWK.—Some interesting observations on the young of *Accipiter nisus* by Mr. J. Steele Elliott (*Zool.*, 1909, pp. 467–8) reveal the facts that the young were in the nest for twenty-seven days, and were in the vicinity for eight days more; the parent birds removed most of the feathers from the prey before bringing it to the nest; the whole of a bird smaller than a Thrush appears to be devoured, but in the case of such birds as Thrushes the legs, and in larger birds the legs, head and part

of the skeleton, are left; the "kills" found during the time the young were in or at the nest included seven Pheasants, one fowl, one Woodcock, two Jays, five Thrushes, three Blackbirds, one Bullfinch, one Robin, two Redstarts, one Chaffinch, and several warblers.

**GANNET INLAND.**—A Gannet (*Sula bassana*), in first year's plumage, was picked up alive on Salisbury Plain, Wiltshire, on November 30th, 1909, by Captain Faith (C. E. J. Hannett, *Selborne Mag.*, 1910, p. 14).

**LITTLE BITTERN in OXFORDSHIRE.**—A female *Ardetta minuta*, with its wing shattered by contact with a telegraph wire, was picked up at Somerton, in the Cherwell Valley, on June 27th, 1909 (O. V. Aplin, *Zool.*, 1909, p. 468).

**ALBINO MALLARD.**—Mr. W. E. Suggitt writes to us that a pure white *Anas boscas* was shot at Tetney Haven, Lincolnshire, on January 29th, 1910.

**ERYTHRISM OF THE RED GROUSE.**—A rufous variety of *Lagopus scoticus*, similar to the variation of the Partridge known as *Perdix montana*, was exhibited by Mr. J. G. Millais at the December meeting of the British Ornithologists' Club (*Bull. B.O.C.*, XXV., p. 40). Such a variety is extremely rare in the Red Grouse, but there is a male (Loch Sween, Aug. C. C. S. Parsons) in the British Museum which resembles the example shown by Mr. Millais, who has examined another specimen (a young female) shot by Sir Peter Walker in Arran in September, 1907, from a covey which contained similar birds. The bird shown is an adult male, shot at Carradale, Argyllshire, in October, 1908, and may be thus described:—"The chestnut-red covered the front of the neck and extended to the nape, chest, greater part of the back, scapulars, rump, and tail-coverts. On the scapulars and rump a few curious feathers were blood-red and black, edged with a rufous tint. The primaries were normal, but the secondaries and other wing-feathers were very singular, being rufous, edged with black locps, instead of being barred. The crown of the head, lower breast, flanks, and vent were of a deep burnt-sienna. A few normal white feathers were to be seen on the bastard wing, lower breast, and sides of the lower mandible. The feet and legs were normal."

**PLUMAGE OF THE WOODCOCK.**—Mr. W. R. Ogilvie-Grant has made a careful investigation into the plumage of young and adult Woodcocks of both sexes, and is of opinion that it is "impossible to distinguish between the plumage of the male and female Woodcock, or between old birds and young

birds of the year, when once the latter have fully developed their flight-feathers" (*Bull. B.O.C.*, XXV., p. 36). The fulvous "notches," or tooth-like markings, often present on the outer webs of the primaries and thought to be evidence of immaturity (H. Saunders, *Man. B.B.*, p. 570), Mr. Grant clearly shows to be merely individual variation. The differences in the spots on the uppersurface and in the barring on the undersurface are also shown to be simply individual. These observations were confirmed at the meeting of the B.O.C. at which Mr. Grant made his remarks by Dr. C. B. Ticehurst and Mr. J. L. Bonhote, who had also studied the subject. Mr. Grant further made the suggestion that in the Woodcock, as in the Cuckoo, males may be more numerous than females, and that this might be proved by sacrificing a few broods and ascertaining the sex of the four individuals in each family party.

UNSEASONABLE NESTING.—In a note under this heading in the last number (p. 309) Mr. Stanley Pershouse's name was unfortunately spelt Pashouse. Miss E. L. Turner writes to us that a Robin's (*Erithacus rubecula*) nest with three eggs slightly incubated was found under the tiles of a roof of a cart-shed on January 26th at Tunbridge Wells, Kent.

In the "Field" for February 5th, 1910 (p. 239), "G. B." records from Devonshire that he found a young Song-Thrush (*Turdus musicus*) only just able to fly on January 25th; while Mr. W. Cecil Braybrooke writes in the same Journal from Fairford that a pair of Starlings (*Sturnus vulgaris*) were feeding young in the nest on January 26th; from co. Kildare Mr. S. G. Williams notes that a Pheasant's nest with two eggs was found on January 30th.

# REVIEWS

*Der Zug des Steppenkuhnes, Syrrhaptus paradoxus* (Pall.), nach dem Westen, 1908. Von V. Ritter von Tschusi zu Schmiddhoffen, 1909 (pp. 1-41).

RITTER VON TSCHUSI'S pamphlet on the Westward Migration of Pallas's Sand Grouse in 1908, which originally appeared in the "Verh. und Mitteil d. Siebenbürg. Vereins für Naturwissenschaften," Bd. LVIII. (1908), now lies before us. Besides giving references to the literature of this latest movement, and a detailed account of the recorded appearances arranged under the various countries, he also contributes a chronological record of the invasion. Another interesting feature of this most useful paper is the series of notes (also in chronological order) of the lesser movements and casual occurrences of this species in Europe in addition to the three great invasions of 1863-4, 1888-9 and 1908. Previous writers on this subject have concentrated their efforts on the more general movements, to the neglect of this interesting branch of study. We think, however, that the list given on pp. 8-13 and 35-36 might be rendered more complete by the inclusion of the following records, which appear to have been overlooked.

- [1860. H. Saunders (*Yarrell*, IV Ed., III., p. 33; cf. *Neuer Naumann*, VII., p. 31) states that one was obtained at Sarepta in this year.]
1872. A flock of four seen near Girvan, Ayrshire, on June 25th, and one bird on June 29th (R. Gray, *Ibis*, 1872, p. 335).
1875. A flock of six met with and two obtained by Baron Tiezenhausen in winter near Lenkoran (G. Radde, *Ornis Caucasia*, p. 335).
1876. About 15 or 20 seen on May 27th, by E. J. Boulton (T. Southwell, *Birds of Norfolk*. III., Appendix, p. 392) at Winterton, Norfolk. Three seen on the sands near Teesmouth, Yorkshire, at the latter end of August, by T. H. Nelson (*Birds of Yorkshire* II., p. 499). A male and female shot near Kilcock, co. Kildare, Ireland, on October 4th, recorded by W. N. Coates (*Field*, October 14th; *Yarrell*, IV Ed. III., p. 38).
1878. Two specimens obtained near Lenkoran by A. Maximovitch (Radde, *Ornis Caucasia*, p. 335).

1890. Three seen coming inland from Holkham Bay, Norfolk, on April 22nd; while on May 9th, five were observed on the beach at Lowestoft and another flock of nine on the 10th. Mr. E. Neave also reported a flock of 14 off the Coast near Aldeburgh (*Science Gossip*, 1890, p. 187, and *Birds of Norfolk*, l.c.) about May 15th. Six seen on May 24th coming in from eastward, half a mile at sea off the Spurn Light, Yorkshire, which alighted on the sandhills (*Nat.*, 1890, p. 202; *Birds of Yorkshire*, II., p. 503). A flight of 30 reported near Driffeld, Yorkshire, about May 30th; and eight in North Lincolnshire at the same time (J. Cordeaux, *Birds of Norfolk*, III., Appendix B., p. 396, footnote).
1891. Six seen by Col. Haworth-Booth on the cliff tops at Roulston, Yorkshire; two specimens subsequently obtained (*Nat.*, 1895, p. 327, and *Birds of Yorkshire*, II., p. 503).
1899. A small flight seen by P. Loten at Easington, Yorkshire, on May 13th (*Nat.*, 1899, p. 175; *Birds of Yorkshire*, II., p. 503).
1907. One seen at Hendon, Middlesex, on September 23rd, by W. Wells Bladen (*BRITISH BIRDS*, I, p. 190).

On the other hand we have to thank the author for bringing to our notice a record contributed by the late Professor Newton to the "Hauptber I. Offiz. Teil. II. Internat. orn. Kongr." (Budapest), p. 200,\* of two pairs observed at Binsness (*sic*), N. Scotland, between April 20th and 30th, 1891.

Reviewing the last invasion the author is of opinion that it was on a much smaller scale than the two great movements of 1863 and 1888, and that the main body of migrants became divided into two branches, the northern division avoiding the Carpathian Range and heading for the North Sea and the British Isles in small flocks, while the southern stream so far as is known did not penetrate further than S. Italy, although large numbers were observed on passage in Rumania. The Frisian Islands and the Dutch Coast, which were frequented by large numbers during previous invasions, were almost entirely avoided in 1908, while almost the only indication of a return passage of any importance appears among the Rumanian records, a large flock, numbering several hundreds, having been observed near Sascut in November.

\* There is little doubt that the two records from Cleveland, Yorkshire, quoted on page 27 refer to the same occurrence.

Another point of much interest is the fact that this species has gradually established itself in the Ufa Government of European Russia in considerable numbers during the last ten or twelve years, as recorded by E. Remann in the "Ornith. Jahrbuch," 1908, p. 232, where he ascribes their presence to the fact that the virgin steppes are now being brought under cultivation by the Mennonite (*i.e.* Moravian) colonists. Flocks consisting of many hundred birds are now to be met with in autumn after the harvest.

F. C. R. JOURDAIN.



# LETTERS

To the Editors of BRITISH BIRDS.

“THE NATURAL HISTORY OF BRITISH GAME BIRDS.” BY J. G. MILLAIS.

SIRS,—In offering the following remarks on Mr. Millais' work I should like it to be clearly understood that they are not made in any spirit of carping criticism, but merely from a desire to prevent important and interesting facts, which have already been well ascertained and correctly described, from being obscured or misrepresented.

On turning over the leaves of Mr. Millais' imposing-looking volume one had hoped to find that the life-history of the few species included had been treated in such an exhaustive manner that nothing of importance had been omitted or could be added to throw further light on the subject. But, unfortunately, this is by no means the case, and on reading the letterpress we find many serious omissions, inaccuracies and careless statements which seriously detract from the work, and cannot be allowed to pass unchallenged. Mr. Millais' work will be widely read, and we learn on the best authority that the first edition has already been sold out; it is therefore necessary to draw attention to certain important points which require revision in a possible subsequent edition.

On page 37 one comes to the Red Grouse (*Lagopus scoticus*), a species of unusual interest not only from an economic point of view, but also on account of the complicated and bewildering changes of plumage it undergoes. After devoting many years to the study of these changes, I was the first to discover exactly what takes place, and to explain the laws which govern the apparently innumerable variations in the plumage of both the male and the female.

In 1893 I published a brief summary of the results of my investigations in the “Catalogue of the Birds in the British Museum” (XXII., pp. 36–38); and later these were fully described and illustrated in a paper by myself in the “Annals of Scottish Natural History” (1894, pp. 129–140, pls. v. and vi.), and in my “Handbook to the Game-Birds” (i., pp. 27–34, pls. ii. and iii. (1895). Since that date I have examined a very large number of Red Grouse and have found

no occasion to modify or alter the conclusions then arrived at, which were based on incontestible evidence. The majority of the birds I had for examination are preserved in the Natural History Museum, and may be examined by any one who is interested in the matter.

When I first began to make a serious study of the apparently endless variation to be found in the plumage of this species there was no material available for examination in the Museum; but through the kindness of various landowners in Scotland I was able to procure a large and very complete series of birds killed twice a month during *every* month of the year, and was thus able to examine in the flesh the plumage of every individual. It was then that I discovered the remarkable peculiarity of the moults of the Red Grouse, one without parallel among birds, even of this genus, viz., that the changes of plumage of the male and female occur at different seasons.

The facts ascertained may be briefly summed up as follows:—

The *male* has no distinct spring-plumage, but has distinct autumn- and winter-plumages, and retains the latter throughout the breeding season.

The *female* has a distinct spring-plumage, which is complete by the end of April or the beginning of May, also a distinct autumn-plumage, which is retained till the following spring.

To put it more concisely, both male and female have two distinct moults during the year, but in the male they occur in autumn and winter, and in the female in spring and autumn, the former having no distinct spring- and the latter no distinct winter-plumage.

The Red Grouse is generally regarded as merely an insular form of the Willow-Grouse, and it might naturally be supposed that as the British species does not turn white in winter, such protective plumage being unnecessary in the localities it inhabits, the winter-moult had been gradually dropped. But, as has been already shown, this is the case with the female only, and the male, for some unknown reason, changes all or the greater part of the newly-acquired buff-and-black autumn-plumage for a winter-garb of chestnut and black, which is retained till the following autumn.

During the past five years Dr. Edward A. Wilson, while acting for the "Grouse Commission," has examined many thousands of Red Grouse killed throughout the year, and he confirms my observations and agrees that without doubt the male breeds in his winter-plumage.



In spite of my exhaustive papers on the plumage of the Red Grouse published between 1893 and 1895, Mr. Millais (p. 38) makes the following statement\* :—

“ Until 1909 naturalists do not seem to have devoted much time to the study of the summer plumage of the Red Grouse, probably owing to the difficulty of obtaining specimens. Mr. Ogilvie-Grant, in his excellent little book on the *Game Birds* (p. 29), considers that the Red Grouse, being an insular form, living in warmer latitudes where a white winter dress is unnecessary, has gradually dropped the spring moult necessary to his northern relation, the Willow Grouse, and in the main he is right; but not completely so. He states definitely, moreover, that the male breeds in the ‘winter dress,’ suggesting that there is no accession of new feathers similar to the summer dress of the Willow Grouse, and *in this he is incorrect*” [the italics are mine].

If before publishing the above extraordinary and entirely misleading statement Mr. Millais had taken the trouble to visit the Bird-Room at the Natural History Museum, he might there have inspected a series of Red Grouse, both male and female, killed in every month of the year, which must have convinced him that it was he himself who was entirely in error. Though I have not retained for the Museum the whole material examined in the flesh (some 200 birds killed throughout the year), he would have found a series of about 150 carefully selected specimens, which when laid out month by month tell their own story.

I must most emphatically deny that “a considerable pattern change” takes place in the winter-plumage of the male; nothing of the kind occurs, though with the approach of spring and the greater abundance of food the birds possibly become more glossy, the secretions of the oil-gland, with which the feathers are lubricated and polished being no doubt more copious at that season. Males in winter-plumage vary greatly; in some individuals the upperparts are almost entirely clad in the chestnut-and-black winter-plumage and very few of the more coarsely-marked buff-and-black autumn-feathers are retained, in others a greater or lesser number of autumn-feathers are conspicuous among the new winter-plumage. These differences are purely individual, as was fully set forth in my “Handbook to the Game-Birds” (i., p. 30).

Probably these variously marked birds retaining a greater or lesser number of autumn-feathers are what Mr. Millais alludes to when he asserts (p. 38) that “a considerable pattern change was also noticeable.”

\* The same statement had previously been published by Mr. Millais in the Supplement to the “Field” on the 7th of August, 1909, p. vii., headed “The Summer Plumage of the Cock Grouse,” but had escaped my attention.

On page 40 he sums up his involved and somewhat lengthy remarks as follows :—

“ In conclusion, it is the case that the summer or breeding plumage of the cock grouse is achieved, for the most part, by repigmentation and pattern change of most of the winter feathers below the neck, and above that part by a gradual spring moult (differing considerably in individuals as to date), whilst in the case of certain males these ornamental feathers may extend in small numbers to the nape, scapulars, chest, back and tail-coverts, thus partly forming an ornamental nuptial dress similar in character to that of the Willow Grouse. It is also a new and curious fact that the male should moult the feathers of the legs and feet at any period between March 30th and June 17th, as the margin of time is so very wide.”

Mr. Millais has entirely misunderstood the meaning of what he has seen. In the first place the “ new richly marked black and yellow feathers ” (*see* p. 39) which he found on the head, neck, etc., of two birds killed on the 1st and 13th of May respectively were, of course, the beginning of the *autumn-plumage*, which every male assumes and which always commences to appear on the head and neck. In some individuals a few of these feathers may be found even as early as March and April, but this is by no means always the case, for they generally begin to appear towards the end of May or early in June. I can produce a male killed in December in which a few black and yellow feathers can be found coming in on the crown and nape. Such precocious birds are, however, quite exceptional, and do not in any way alter the *certain fact* that the male Red Grouse *does* breed in his winter-plumage without undergoing any change in pattern or otherwise.

In another place Mr. Millais appears to have had a glimmering of the truth, for he writes (p. 39) :—

“ These summer-plumage features (*sic*) would doubtless form part of the true autumn-plumage and would be cast somewhere about mid-September, but that does not seem to detract from the fact that they are a *separate and ornamental* attribute achieved by the bird for decorative purposes during the time of brilliance, whilst in colour they are in no way quite similar to the dull buff and black autumnal dress assumed in June.”

If these black and yellow feathers “ doubtless form part of the true autumn-plumage ” one may ask how can they possibly be regarded as representing a breeding-plumage ? Are we to believe that these feathers on the head and neck which are “ in no way quite similar to the dull buff and black autumnal dress ” are again replaced at the autumn moult ?

I think if Mr. Millais will re-examine the feet of the birds killed in April, etc., he will find that they are *not* moulting,

but that what he has mistaken for growing feathers are merely the worn down stumps of the old ones.

Speaking of the female Red Grouse Mr. Millais writes (p. 38):—

“Mr. Ogilvie-Grant, who has made a close study of the species, asserts that every female attains the whole summer dress by means of a moult, but though this may be regular, I am not at all convinced that it is the invariable rule.”

This is entirely a misrepresentation. I never said that the *whole* of the summer-plumage was attained in this way. What I really wrote was: “So far as I have been able to ascertain from examining a large number of specimens, the summer-feathers of the *upperparts* are always attained by moult, and never by change of pattern.” I particularly mentioned that the feathers of the chest, sides and flanks are assumed partly by moult and partly by change of pattern (*see Handbook to the Game Birds*, I., pp. 31–34).

It seems a pity that no coloured plate is given of the male Red Grouse in his autumn-plumage; three plates are devoted to the different types in winter-plumage, but the former, which is so interesting, so striking, and so little known to sportsmen should surely have been figured.

The general remarks on Pheasants (p. 75) betray an entire ignorance of the various species. One instance is sufficient. The Japanese Pheasant (*Phasianus versicolor*), we are told, is a *sub-species* of the Common Pheasant (*P. colchicus*)! It would be difficult to imagine two more well-marked species, one being confined to the islands of Japan, while the other is found only in Western Trans-Caucasia and on the eastern and south-eastern coasts of the Black Sea.

Mr. Millais says that he is quite unable to accept all the local forms of the Common Pheasant scattered over an immense area and differing only in trifling particulars from one another, but in most cases they inhabit areas quite apart. I do not think from reading what he has written that he can have read Mr. Buturlin's articles on the true Pheasants in the “Ibis” (1904, pp. 377–414, and 1908, pp. 570–592). Mr. Buturlin enumerates a large number of forms, species and sub-species, but although many naturalists will agree that all these are not distinctive enough to be separated, some, such as *P. alpherakyi*, appear to be well characterised. It is this species Mr. Millais figures under the name *P. hagenbecki*, which is a very distinct species. The only example of Hagenbeck's Pheasant in this country is the type-specimen in the Tring Museum, and this Mr. Millais has never seen.

He has made a mistake in supposing that the birds which were sold in the Leadenhall Market were *P. hagenbecki*. They were, as Mr. Buturlin informs us, *P. alpherakyi*, and came from Kharbin near the Siberian railway, which does not pass anywhere near the Kobdo Valley, in the Southern Altai, the home of *P. hagenbecki*. This error was no doubt partly due to Mr. Tegetmeier, who took it for granted that the Leadenhall birds were *P. hagenbecki*, and he, like Mr. Millais, had never seen the type-specimen at Tring. The mistake had, however, been corrected by Mr. Buturlin in 1904.

That the various species of Pheasant should interbreed where their different geographical ranges meet is not surprising. The Blackcock crosses with the Capercaillie, the Willow-Grouse, the Red Grouse and the Hazel-Hen, which belong to different genera, but even Mr. Millais does not suggest that for this reason they are to be regarded as sub-species of one another.

It is disappointing to find that no mention whatever is made of the Red-legged Partridge in its first plumage, which is so remarkable that young birds shot in early September are constantly supposed to be hybrids between that species and the Common Partridge. I have them sent or brought to me nearly every year as such.

Lastly, the bird figured as the female of the Quail is not that species, but the *red-throated* "Cape Quail," a smaller resident bird met with in South Africa and in some of the islands off the African coast. Both this and the common species occur in the Azores, and are easily distinguished when on the wing. Typical examples of the Common Quail have the cheeks and throat *white*, with the black anchor-shaped mark well developed.

W. R. OGILVIE-GRANT.

British Museum (Natural History),

Cromwell Road, S.W.

January 22nd, 1910.

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## THE LANCEOLATED WARBLER (*Locustella lanceolata*) IN LINCOLNSHIRE.

### A NEW BRITISH BIRD.

BY

G. H. CATON HAIGH.

WHEN walking along the sea-bank at North Cotes, Lincolnshire, on November 18th, 1909, I shot an example of the Lanceolated Warbler (*Locustella lanceolata*). I first observed the bird in the long grass on the side of

one of the marsh-drains, out of which it ran on to the short grass of the adjoining field. I watched it for a short time as it ran about the ground like a mouse, and I noticed that it kept its tail depressed, and not erected over the back, as is usually the case with the Grasshopper-Warbler (*Locustella naevia*) when running over open ground. At one time it flew up to a barbed-wire post close by, up which it climbed with the facility of a Tree-Creeper. It soon flew back to the ground, and I shot it just as it reached the long grass again. Unfortunately the bird was much shattered by the shot, and I had great difficulty in making a skin of it. It proved to be a male, and I think adult, and was excessively fat.

In appearance this bird is considerably smaller than the Grasshopper-Warbler. (The wing measures 56 mm. as against 60-66 in *L. naevia*.) In the colour of the upperparts it closely resembles that bird, but the dark centres of the feathers are larger and more clearly defined, and the uppersurface of the wings is a trifle more rufous. The underparts are thickly spotted with long-shaped blackish spots or streaks on a nearly white ground; the spots on the middle of the breast being larger and rounder than those on the throat and flanks. There is a slight tinge of buff on the lower throat. The beak had the base of the lower mandible pale yellow, the rest horn-colour. The legs and feet were white, with a very faint tinge of flesh-colour; claws white.

The autumn migration was practically over, and the only birds moving were a few Fieldfares, Redwings and Blackbirds. The weather at the time was very cold, with heavy showers, and a strong E.N.E. wind. There had been sharp frosts every night for a week, as much as nine degrees on the 15th and 16th, but only three degrees on the night of the 17th. The whole of the summer and autumn was characterised by the prevalence of north-west winds, and the consequent almost complete absence of visible migration.

The Lanceolated Warbler does not appear to have

occurred previously in any part of western Europe.\* It breeds in Kamchatka, Japan and Saghalien, through Siberia, and seldom in Russia (Hartert, *Vog. pal. Fauna*, p. 554). It passes through China on migration and winters in India, as far west as Etawah, Burma, Pegu, Tenasserim and the Andaman Islands (Oates, *Birds of Brit. India*, Vol. 1, p. 354).

The skin was examined by Dr. E. Hartert, to whom it was submitted by Mr. H. F. Witherby, and my thanks are due to both for the trouble they took in the identification of this very much-damaged specimen.

\* We believe that there are only two recorded occurrences of the bird in Europe, one in North Russia, the other near Cattaro, Dalmatia, in November, 1907 (Grossmann, *Orn. Jahr.*, 1908, p. 255).—EDS.

THE MARSH-SANDPIPER (*Totanus stagnatilis*, Bechst.)  
AS A BRITISH BIRD.

BY

M. J. NICOLL, M.B.O.U.

IN his "Manual of British Birds" (2nd Edition, p. 620) the late Howard Saunders calls attention to the fact that the reputed Marsh-Sandpiper which was shot at Tring Reservoir in October, 1887, "was not submitted to competent authorities at the time, and has since been burned."\* This being the only record of this species in Great Britain up to the present time, its claims for inclusion in the British list have been slender. In June, 1909, however, a pair of undoubted *Totanus stagnatilis* was obtained in Sussex.

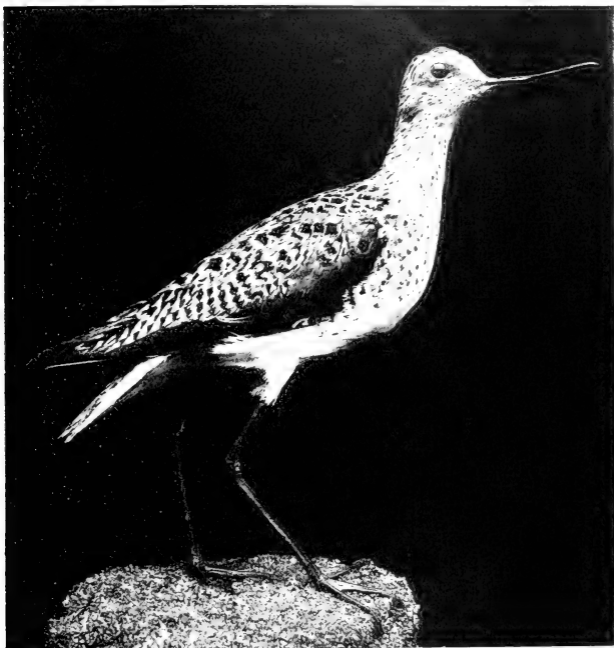
The female of the pair—an adult in summer-plumage—was shot on June 16th, at a pool of water in the beach on the west side of Rye Harbour. Two days later an adult male was shot at the same place. Both of these were examined by the writer, the first in the flesh and the second when partly skinned.

These interesting birds are now in the collection of Mr. J. B. Nichols, who has kindly lent them for the purpose of reproducing the accompanying figure.

It is satisfactory, though not surprising, that the Marsh-Sandpiper has at last been added to the British list. It has occurred on Heligoland and in Northern France, therefore it was only to be expected that sooner or later it would put in an appearance on our coasts. The occurrence of a rare straggler in England at a time

\* The Hon. Walter Rothschild informs us that this specimen was undoubtedly correctly identified at the time by himself and verified by reference to Dresser's "Birds of Europe" and other means. Unfortunately, through a bad accident, some hundreds of Mr. Rothschild's birds were burnt, and among them this specimen of the Marsh-Sandpiper. Howard Saunders' statement in the "Manual" is explained by the fact that he did not know Mr. Rothschild at all at the time, and was unaware of his capability to identify the bird correctly.—EDS.

when it should be in the midst of breeding operations would seem remarkable, were it not for the fact that this is by no means an unprecedented event. I know of several instances of the appearance in England of birds,



MARSH-SANDPIPER—MALE SHOT NEAR RYE, SUSSEX, ON  
JUNE 18TH, 1909.

not known to breed here, at a time when they should have been engaged in rearing their young. The cause of this is probably due to the fact that their eggs have been destroyed, and it being too early to migrate southwards,

the birds have wandered aimlessly about until they reached our coasts. Such a solution is frequently suggested by Gaetke in his "Birds of Heligoland."

The breeding range of the Marsh-Sandpiper in Europe appears to be confined to Austria-Hungary and Southern Russia, but there is some evidence that it has bred in the Camargue, and Dr. Cullen said he took one nest in the Dobrudscha. It also extends right across Asia, probably to the Sea of Okhotsk and north to Lat. 55 or 56 in Siberia. In winter the bird ranges to the Cape in Africa, and to the Malay Archipelago, New Guinea and Australia.

In Egypt, the only country in which I have met with it, the Marsh-Sandpiper is not uncommon during the autumn, winter, and early spring. It frequents marshy ground and the shores of the lakes, such as Menzaleh, usually singly, though sometimes in small flocks. It is shy and difficult of approach.

In appearance the Marsh-Sandpiper somewhat resembles a miniature Greenshank, but the call-note, general habits, and flight are more like those of the Wood-Sandpiper (*T. glareola*). So far as my limited experience goes, this Sandpiper seldom consorts with other waders. It is easily distinguished even at a distance from the Wood- and Green Sandpipers by its pale coloration and long legs.

*Winter-plumage*, adult male, November 6th, 1906, Province of Giza, *forehead*, *lores* and whole of *underparts* pure white; *nape*, grey; *crown*, *mantle*, *scapulars* and *inner secondaries*, greyish-brown; *lesser wing-coverts* dull brown; *greater wing-coverts* greyish-brown, like the mantle, each feather narrowly edged with white; *lower back* and *rump* white; *upper tail-coverts* white, barred with black; *tail*: outer pair of rectrices white, marbled with grey on the outer web, remainder similar, but with irregular black bars on the inner webs, central pair smoky-grey with V-shaped bars of black; *remiges* dull black, the first primary having a white shaft, the others being brown.

In some specimens the feathers of the mantle are narrowly edged with white, and the long inner secondaries are faintly blotched with black, such examples are, I fancy, birds of the year. Wing 132 mm ; culmen 47 mm.; tarsus, 51 mm.

The summer-plumage is somewhat similar, but the whole of the upperparts are mottled and streaked with black, while the feathers of the cheeks, ear-coverts, and the upper part of the breast have a broad dark mesial mark which produces a spotted appearance.

The bill is very slender, and like that of the Green-shank is slightly recurved towards the tip.

## SEQUENCE OF PLUMAGES IN BRITISH BIRDS.

## IV.—THE BRITISH STONECHAT, THE BRITISH AND CONTINENTAL REDBREASTS AND RED-SPOTTED AND WHITE-SPOTTED BLUETHROATS.

BY

H. F. WITHERBY.

## THE BRITISH STONECHAT.

*Pratincola torquata hibernans*, Hartert.\*

**DOWN-PLUMAGE.** Dark-grey, of moderate length. *Distribution.*—Inner supra-orbital, occipital, humeral and spinal tracts, scanty on the two last (*vide*, C. B. Ticehurst, Vol. III., p. 151).

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

**MALE.** Top of *head* black, each feather with a narrow mesial buff line; *nape* the same, but with broader wedge-shaped buff lines; *mantle*, *scapulars* and *back* the same, but with rufous markings on each side of the buff wedge; *upper tail-coverts* with long rufous fringes; *chin*, *throat* and sides of *neck* greyish-buff speckled with black; *breast* more rufous-buff, with large black spots; *belly* and *under tail-coverts* buff; *flanks* the same, but sparsely spotted with black; *under wing-coverts* buff speckled with black; *axillaries* greyish-white, with black bases; *tail-feathers* brownish-black, with rufous-buff edgings and tips; *wing-feathers* the same, but the edging very narrow in the *primaries* and becoming broader as the innermost *secondary* is reached, the innermost *secondary* with the basal half of the outer web white, and the two next with the basal third white, all the wing-feathers narrowly edged with buffish-white on the inner web; *primary-coverts* brownish-black, with buff edges and tips; innermost *greater wing-coverts* white, with buff tips, the next outwards partially black and white, and the rest black, with rufous-buff edges and tips; *median wing-coverts* black, with rufous-buff fringes, the innermost with buffish-white fringes; *lesser wing-coverts* black, with rufous-buff fringes.

**FEMALE.** Like that of the male, but the three innermost *secondaries* without any white, but with a small buff spot at the base of

\* The SIBERIAN STONECHAT (*Pratincola torquata maura*), which has been once obtained in England (*vide antea*, Vol. I., p. 7), may always be distinguished in Winter- and Summer-Plumage: in the *male* by the rump and upper tail-coverts having no black markings, the bases of the tail-feathers being white, the bases of the outer webs of *five* of the innermost secondaries being white, and by the inner webs of all the wing-feathers having a much broader margin of pure white; the belly being whiter and the neck-patches larger; in the *female* by the rump and upper tail-coverts being white, with buff tips; the tail-feathers having some greyish-white at the base; the innermost secondaries having white at the base of the outer web.



the outer web, and the innermost *greater wing-coverts* not white, but like the other wing-coverts, except that the tips are whitish-buff and broader.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, including the three innermost secondaries, but excluding the rest of the remiges, the rectrices, and the primary-coverts. The bird becomes practically indistinguishable from the adult in winter, but the wing-feathers (except the three innermost secondaries), tail-feathers and primary-coverts often have a slightly more worn appearance.

**MALE.** Top of *head, scapulars, mantle* and *back* brown and black, the feathers being jet-black, with long reddish-brown fringes; *rump* more uniform reddish brown; *upper tail-coverts* white, with black pear-shaped centres and rufous tips (the bases of the feathers are black); *chin, throat, lores, ear-coverts* and *cheeks* black, with buff fringes, sometimes almost obscuring the black; on each side of the *base of the neck* a patch of white, which extends towards the *back of the neck* and on to the *shoulder*, but the white in these portions is covered by long fringes of black and chestnut; *breast, sides of belly* and *flanks* chestnut, with narrow buff fringes; *centre of belly* and *under tail-coverts* whitish-buff; *under wing-coverts* black, fringed with white; *axillaries* white, with basal half black; *tail* and *wing-feathers* and *primary-coverts* as in the Juvenile, except that the three innermost *secondaries* have more white; *greater wing-coverts* as in the Juvenile, but the innermost with much more white and the others with narrower rufous-buff edges and tips; *median wing-coverts* black, with buff tips, the innermost white, or partially white, as in the greater; *lesser wing-coverts* the same, but the innermost with white tips only.

**FEMALE.** The *upperside* is much like that of the male, but the black is less intense and the *upper tail-coverts* have no white; *lores, ear-coverts* and *cheeks* brown speckled with black; *chin* buff; *throat* buff, with the black of the lower portion of the feathers showing through; *sides of neck* whitish-buff, not white, as in the male; *breast* and *belly* much the same as the male, but not so bright; *tail-* and *wing-feathers* as in the male, but the three innermost *secondaries* with only a spot of buff and no white at the base of the outer web; *wing-coverts* as in the male, but with considerably less white on the inner ones.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion.

**MALE.** Whole of the *head, throat, mantle, scapulars, back* and *rump* jet-black, with just an indication of the brown edgings; *upper tail-coverts* black and white; patches on the *sides of neck* larger than in the First Winter and pure white; *breast* deeper chestnut; *centre of belly* and *under tail-coverts* almost white; *axillaries* almost black, the long white fringes having nearly worn off; *tail* and *wing-feathers* brownish-black; *wing-coverts* jet-black, with the white patch formed by the innermost ones showing larger.

N.B.—There is much variation in individuals owing to the amount of abrasion which has taken place.

**FEMALE.** The *upperside* becomes more distinctly marked with black owing to wear, but there is always much brown in the plumage; the lower portion of the *throat* becomes partially black by

the wearing of the buff fringes, and the *neck-patches* become larger and more whitish, but they are very small in extent as compared to those of the male; the *breast* becomes brighter, but never so bright as in the male; the *belly* remains buff, and not whitish, as in the male; the white "*wing-patch*" becomes more distinct, but is much smaller than in the male.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult. The plumage is like that of the First Winter, but all the remiges, the primary-coverts and tail-feathers are new.

**ADULT SUMMER-PLUMAGE.** Acquired by abrasion. The plumage is like that of the First Summer.

## THE BRITISH REDBREAST.

*Erithacus rubecula melophilus*, Hart.

### MALE AND FEMALE.

**DOWN-PLUMAGE.** Dull jet-black. *Distribution.*—Inner supra-orbital, occipital, humeral, and spinal (short) (*vide*, C. B. Ticehurst, Vol. II., p. 189).

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

Feathers of the *upperside* buff, with edgings and tips, varying in width, of dark brown, giving the whole a spotted appearance; feathers of the *rump* and *upper tail-coverts* rufous-buff, with dark brown tips; *chin* and *throat* buff or greyish-buff, each feather narrowly edged with brown; *breast* and *flanks* rather more rufous and the edgings to the feathers brown; *belly* greyish-white, faintly speckled with brown; *under tail-coverts* buff; *tail-feathers* dark brown, tinged with rufous, especially on the outer webs; *under wing-coverts* buff; *axillaries* buffish-white; *primaries* and *secondaries* brownish-black, the outer webs olive-brown and the inner webs edged with greyish-buff, the innermost secondaries olive-brown, with small wedge-shaped buff tips; *primary-coverts* as the primaries; *greater wing-coverts* dark brown, with wedge-shaped buff tips; *median* and *lesser wing-coverts* with larger buff tips and very narrow edgings of dark brown.

N.B.—Some examples are considerably more rufous-buff than others, and the buff tips to the inner *secondaries* and *greater wing-coverts* vary in size in different individuals.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the remiges, primary-coverts, greater wing-coverts and rectrices.

*Upperside* uniform dark olive-brown; feathers of the *rump* with long olive-brown fringes, concealing a band of silvery-grey; *upper tail-coverts* rufous-brown; *forehead*, *lores*, *lower ear-coverts*, *chin*, *throat* and *breast* rich reddish-orange; *upper ear-coverts* olive-brown; *sides of neck* and *breast* blue-grey; centre of *belly* white; *flanks* pale olive-brown; *under tail-coverts* buffish-white; *tail-feathers* as in the Juvenile; *under wing-coverts* buff; *axillaries* buffish- and greyish-white; *wing-*

*feathers, primary-coverts and greater wing-coverts* as in the Juvenile, but the buff tips to the innermost *secondaries* and *greater wing-coverts* worn and smaller; *median* and *lesser wing-coverts* uniform olive-brown as the *mantle*.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion and fading.

As in the First Winter-Plumage, but paler, not so deep and rich in colour on the *upperside*, the buff tips to the inner *secondaries* mostly worn off and those to the *greater wing-coverts* much smaller through wear.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

The plumage is like that of the First Winter, but the innermost *secondaries*, instead of having wedge-shaped buff tips, have very narrow even fringes of buff or greyish-buff, and the buff tips to the *greater wing-coverts* are much smaller.

**ADULT SUMMER-PLUMAGE.** Acquired by abrasion and fading.

The plumage is like that of the First Summer, with the same differences as between the First Winter and Adult Winter, but not so marked, the buff tips being more worn.

N.B.—I can find no constant differences in the plumage of males and females at any age. In size males average slightly larger than females in length of wing, but the measurements of individuals of each sex overlap: Male 77–73 mm., average 74.57 mm.; Female 77–70 mm., average 73.16 mm.

## THE CONTINENTAL REDBREAST.

### *Erithacus rubecula rubecula*, L.

This form occurs regularly in autumn (and probably also in spring) on the east and south-east coasts of England, and has been taken both in autumn and spring at St. Catherine's Lighthouse, Isle of Wight, and probably occurs in many other parts of the British Islands, as a bird of passage in any case. The sequence of its plumages appears to be exactly similar to that of the British Redbreast.

The buff tips to the *greater wing-coverts* are generally paler in colour than in the British Redbreast, and in adults they are often entirely absent and generally very small and inconspicuous. The *upperside* in Winter-Plumage has an olive-green tinge, and is much less brown than in *E. r. melophilus*, while in summer it attains a distinctly greyish tinge by abrasion and fading. Specimens of *E. r. melophilus* in worn Summer-Plumage approximate in the colour of the *upperside* to specimens of *E. r. rubecula* in Winter-Plumage. The colour of the *throat* and *breast* is always more yellowish-orange and not reddish-orange, as in the British Redbreast, while the *flanks* are much less brown and the *belly* whiter. The average measurements of *E. r. rubecula* appear to be smaller. Male wing 75–72 mm., average 73.57 mm.; Female wing 72–69 mm., average 70.2 mm.

## THE RED-SPOTTED BLUETHROAT.

*Cyanecula suecica suecica* (L.).

DOWN-PLUMAGE. Not examined.

JUVENILE PLUMAGE. Acquired by a complete moult.

MALE AND FEMALE. Feathers of the *upperside* brownish-black, with a median line of buff which broadens towards the tips; *upper tail-coverts* rufous speckled with black; feathers of the *chin, throat and breast* pale buff, with black edgings and tips; *belly* whitish-grey speckled with black; *under tail-coverts* buff; *primaries* and *secondaries* dark brown, with narrow edgings and tips of pale buff; *primary-coverts* with rather broader edgings and tips of rufous-buff; innermost *secondaries* and *greater wing-coverts* with much broader edgings and tips of rufous-buff; *median* and *lesser wing-coverts* broadly tipped with buff; *axillaries* and *under wing-coverts* buff speckled with black; two central *tail-feathers* dark brown, edged and tipped with buff, the rest the same, but with the basal half bright bay.

FIRST WINTER-PLUMAGE. Acquired by a complete moult, with the exception of the remiges, primary-coverts and greater wing-coverts and rectrices.

MALE. *Head* dark brown streaked with black, which forms a dark line on each side of the crown; *mantle, scapulars, back, rump* and *upper tail-coverts* dark brown, the latter with bay bases to the feathers (when the plumage is fresh, the *rump* is often tinged with rufous and the whole of the *mantle* and *back* are tinged with buff owing to the feathers having a very narrow fringe of that colour); *superciliary stripe* warm buff, becoming greyer behind the eye; *ear-coverts* dark brown streaked with buff; *moustachial stripe* metallic blue (in some specimens these blue feathers are very few, and in some they are absent and are replaced by greyish-white feathers); on each side of the *chin* and *throat* a brownish-black line; *chin* whitish; *throat* rufous or rufous-buff, the amount of rufous varying; *upper-breast* metallic blue, forming a band, the feathers when fresh being tipped with greyish-white (the feathers of the upper part of the blue band have white and rufous bases and those of the lower part black bases); below the blue band a black one, on the upper part of which the feathers have narrow fringes of white; these become broader on the lower part of the band and thus form a white band, which is followed by a chestnut band formed by the distal half of the feathers being of that colour (the width and the depth of colour of this band varies); *lower-breast* and *belly* buffish-white; *flanks* greyish-brown; *under tail-coverts* buff; *tail-* and *wing-feathers* and *primary-* and *greater wing-coverts* as in the Juvenile, but the buff edgings and tips considerably worn; *median* and *lesser wing-coverts* dark brown fringed with greyish.

FEMALE. *Upperside, wings* and *tail* like those of the male; *moustachial stripe, chin* and *throat* buffish-white, sometimes flecked with brownish-black; lines on the *sides of throat* and the *breast-band* brownish-black, the feathers being fringed with greyish-white; *breast* below the black band brownish-grey, the feathers having a narrow median stripe of dark brown (occasionally there are a few rufous-buff feathers on the breast); *belly, under wing-coverts* and *axillaries* brownish-white, not buffish-white, as in the male.

**FIRST SUMMER-PLUMAGE.** Acquired partially by moult, which includes only the whole of the chin and throat and the blue breast-band—and by abrasion and fading.

**MALE.** The plumage generally is like that of the First Winter, but the feathers of the whole of the *chin* and *throat*, including the black lines on each side, are replaced by new feathers of metallic blue, with a central spot on the lower part of the *throat* of bright bay feathers. All these feathers are newly grown, the moult taking place in February, March or early April. When freshly grown, they have faint grey tips, which soon become worn off, thus intensifying the colours. The feathers of the *ear-coverts* and the small feathers round the *orbits* are also included in this moult, but the new feathers in these parts are coloured as in the First Winter-Plumage. The rest of the plumage becomes slightly modified by wear, the *upperside* becoming darker; the whitish edgings to the feathers of the black and chestnut breast-bands becoming worn and the colours becoming more intense in consequence; the buff-tips to the *greater wing-coverts* and innermost *secondaries* also become much worn, but they may still be found even in July birds, especially in the *greater wing-coverts*.

**FEMALE.** Generally like the First Winter-Plumage, but some specimens have a blue *moustachial stripe*, a rufous-buff *throat-spot*, and a blue *breast-band*, but the *chin* seems never to be blue.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

**MALE.** Like that of the First Winter-Plumage, but differing in the following particulars:—The feathers of the *chin* and *throat* are bluish-black, with greyish-buff tips, which wear nearly off towards December (the *chin* occasionally has a few metallic blue feathers); the red *throat-spot* and usually also the chestnut *breast-band* are of a deeper colour, and the blue *moustachial stripe* is more pronounced; the *primary* and *greater wing-coverts* are edged and tipped narrowly with greyish-brown, instead of with rufous-buff.

**FEMALE.** Like the First Winter-Plumage, but frequently with a little blue on the *moustachial stripes*, a blue *breast-band* and some rufous-buff and blue on the *throat*, occasionally with some chestnut below the blue band. The *greater wing-coverts* without the buff tips.

**ADULT SUMMER-PLUMAGE.** Acquired by abrasion and by a partial moult involving, as in the moult into First Summer-Plumage, only the chin, throat and blue breast-band and ear-coverts and orbits, and by abrasion and fading.

**MALE.** Like that of the First Summer-Plumage, but the *primary* and *greater wing-coverts* without any rufous-buff tips.

**FEMALE.** Generally like the Adult Winter-Plumage, but individuals may have more colour on the *throat*; the *chin*, however, does not seem to become blue.\*

N.B.—Adult females, which have blue and red colouring on the *throat* and *breast*, may be distinguished from males in First Winter-Plumage

\* I have examined two birds shot in June, and sexed by the collectors as females, which had blue chins, but I think that both of these had been wrongly sexed and were males. Both were in much worn plumage, and one was undoubtedly in First Summer-Plumage.

by the chestnut *breast-band* being generally replaced by brownish-grey feathers with brown centres, and by the *belly* being browner and darker and by the absence of buff-tips to the *primary* and *greater wing-coverts*.

### WHITE-SPOTTED BLUETHROAT.

*Cyanecula suecica wolffi*, Brehm.

The sequence of plumage of this form appears to be exactly similar to that of the last, the moults are precisely the same, and the plumages of the males might be described in exactly similar terms with the following differences in regard to the *throat-spot*.

FIRST AND ADULT WINTER-PLUMAGES. *Throat-spot* silky-white, with greyish-white and often rufous-buff fringes; the basal half of the feathers, especially on the lower part of the *spot*, is of a more silky-white than in *C. suecica*.

FIRST AND ADULT SUMMER-PLUMAGES. *Throat-spot* silky-white, the feathers occasionally with red tips, but in such cases there are always some entirely white feathers, and the silky-white bases may easily be seen by turning up the feathers. The white spot becomes more distinct as the summer advances and the fringes of the feathers wear off, but the area covered by the white spot varies in size, and exceptionally specimens have an entirely blue *throat* without any white in the feathers at all.

N.B.—I can find no differences in the plumages of the females and juveniles of the two forms, but I have not been able to examine sufficient skins carefully collected *at the breeding-place with the males* to make certain that there are no differences.



# NOTES

## THE WOOD-PIGEON DIPHTHERIA.

A DISAPPOINTING number of schedules concerning this enquiry has been sent in. We had hoped that our readers would have filled up and sent in their schedules (attached to the inside cover of the December issue) since the trouble concerned is so small, while the result of the information, whether *negative* or positive, is certain to be useful.—Eds.

### RECOVERY OF MARKED BIRDS.

**BLACK-HEADED GULL** (*Larus ridibundus*).—B. B., No. 3237, marked as a nestling by Dr. C. B. Ticehurst at Llyn Mynyddlod, near Bala, Merionethshire, on June 12th, 1909. Recovered at Rainhill, Lancashire, on January 26th, 1910.

The information was very kindly sent by Mr. J. Black.

**WOODCOCK** (*Scolopax rusticula*).—"Country Life," No. 15, marked by Mr. T. Roose at Bolton Abbey, Yorkshire, on May 19th, 1909. Recovered (picked up dead) at Teir, Dunblane, N.B. No date is given (A. Stirling, *Country Life*, December 4th, 1909).

### MARKING BIRDS.

WE hope that our readers will mark a large number of birds this season. Some of the best results are obtained by ringing a great many birds of the same species, such as colonies of Gulls, Terns, etc. We shall be glad to supply rings to all readers who wish to help in the marking scheme, and we may note that full instructions are given upon the schedules which are sent out with the rings. The rings are kept in packets of twenty each, in three sizes, large size for Gulls, Ducks, etc., medium size for Thrushes, Terns, etc., small size for Robins, Warblers, etc. Requests for rings, should state the quantity required of each size.

Eds.

## BLACK REDSTART IN WILTSHIRE.

A YOUNG male Black Redstart (*Ruticilla titys*) was first seen about midday on March 13th in my garden at Downton, Salisbury. It was about all the afternoon until 5 p.m., which was the last time at which it was seen. I see on referring to the Rev. A. C. Smith's "Birds of Wiltshire" (1887, p. 148) that it has twice been recorded in the county. As it is a species whose migratory movements are of great interest, I venture to report the occurrence.

FRANK PENROSE.

## ACTIONS OF THE ALPINE ACCENTOR.

IN reply to your correspondent, Miss F. Russell (p. 330), I may say that I have observed this species closely in my aviaries during the past year.

Altogether I have had six individuals, and at the present time I have three. I have seen this Accentor *walk*, but only on the rarest occasions, and then only for a very short distance. Its usual means of progression is a hop; it never *runs*. It is singular that other observers besides Mrs. Russell have stated that it walks. The Snow-Finch (*F. nivalis*), a bird found in the same districts and which also spends much of its time on the ground, runs with some rapidity and very seldom hops.

W. E. TESCHEMAKER.

## NUTHATCH ON THE GREAT ORME'S HEAD, NORTH WALES.

THERE can be no loophole for doubt but that the bird which a friend of mine saw on a southern slope of the Great Orme's Head in the spring of 1907 was a Nuthatch (*Sitta cæsia*). His description of the distribution of colours on the bird's plumage, and of its behaviour, particularly the peculiarity, all its own, the bird has of applying its full strength into each stroke and working as it does from the hip-joint, so that the whole weight of its body is added to the blow delivered at the object engaging its close attention, conclusively proves a correct identification. Not only is the occurrence of the Nuthatch on the Great Orme an unprecedented one, but it is also of great interest, mainly, perhaps, because the bird is very rare throughout the whole of North Wales but also from the fact that it was in February, 1907, that I saw my first example of this species in Creuddyn (of which the Great Orme forms a part), prior to which it had not apparently been recorded from anywhere within a radius of twenty-seven miles.

R. W. JONES.



## CORNICAN WOODCHAT IN KENT.

## A NEW BRITISH BIRD.

ON June 29th, 1909, a shepherd shot, in Romney Marsh, Kent, a Woodchat Shrike, which he gave to Mr. G. Bristow, of St. Leonards, on the following day, remarking that it was a very fine "Butcher-bird." On July 1st I examined the bird in the flesh in Mr. Bristow's shop, and the absence of any white speculum at the base of the primaries at once attracted my attention. Having (through the kindness of the authorities at the Tring Museum) compared this bird with the examples of the Corsican Woodchat and Common Woodchat, I had no doubt that it belonged to the former subspecies (*Lanius senator badius*, Hartl.), the characteristic distinctions—absence of white speculum, stouter bill and rather longer wing—being well marked. The breeding range, so far as is known at present, of this bird is confined to Sardinia and Corsica, while in winter it is found in north-west Africa and has occurred in Madeira.

The occurrence of the Corsican Woodchat in Great Britain is very remarkable, especially in June, and it is possible, though there is no proof, that these wanderers that are found in the summer, hundreds of miles from their breeding range, are birds which have either lost their mate or never found one, and have been compelled by some instinct to migrate further.

This bird is now in the collection of Mr. J. B. Nichols, through whose kindness I was enabled to exhibit it before the British Ornithologists' Club on February 16th, 1910.

CLAUD B. TICEHURST.

## FIELD-NOTES ON THE CORNICAN WOODCHAT.

THIS fine and distinct race of the Woodchat is quite one of the most characteristic birds of Corsica below the forest limits, and one cannot travel far in any direction in the cultivated districts without catching sight of the white breast of the cock as he sits crouched on some "coign of vantage." As we approach, he quietly flies down the hillside, followed a few seconds after by his less conspicuous mate, and takes up a similar position a hundred yards away. The usual time of arrival in Corsica is about the third week in April, and gradually the immigrants distribute themselves over the low-lying *plage*, and up the valleys wherever there is open ground and cultivation up to about 2,500 feet. Perhaps the most favoured breeding-places are open hillsides, with a few trees here and there, and big matted clumps of briars interspersed among

the patches of cistus-scrub. Here two or three pairs may be found nesting within a few hundred yards of one another, but as a rule each pair has its own district, which it keeps to itself. The best time for full clutches of eggs is about the fourth week in May, but early nests may occasionally be met with as early as May 12th—13th. It is difficult to lay down general rules as to nesting-sites, for they show a wide range of variation. Perhaps the first nest found may be about 15 feet up in a lichen-covered cork-oak, built to fit right on to a horizontal bough, and not at all conspicuous from below. The next may prove to be in a thick clump of brambles about five feet from the ground, and not to be reached without sundry scratches, while a third is placed far out among the pendant outer branches on some spreading olive-tree, some eight feet high, and a fourth is built among the slender boughs of a sapling ilex, protected by a mass of creepers at its base. The typical clutch consists of six eggs, but sometimes five only are found and occasionally seven are met with. As a rule, they do not vary much in type, but are boldly marked with a zone of leaden shell-markings and a few darker olive-brown spots, on a pale blue, bluish-grey, or more rarely olive-grey ground. There is, however, one extremely handsome type which has been met with on three occasions at least, in which the ground-colour is a warm salmon-pink and the markings are violet-grey and rich sienna-brown. Whitehead found one clutch of this character out of about twenty examined, and I was fortunate to obtain two in 1908—9. The only other Shrike which breeds in Corsica is the Red-backed Shrike (*L. collurio*, L.), and though eggs of the Corsican Woodchat might be confused with some types of British Red-backed Shrikes, they can hardly be mistaken for Corsican eggs of *L. collurio*, which are much smaller than English eggs. Moreover the nests of the two species are essentially different and can be distinguished at a glance, for while *L. senator badius* builds a big, substantial nest of twigs, lichens and flowering heads of grasses, interwoven with roots and cudweed, lined with fibres and some feathers, *L. collurio* in Corsica is content to make a slighter and less compact edifice, generally placed quite low down and composed chiefly of grasses and roots, with a feather or two interwoven. On one occasion we met with a particularly flimsy Woodchat's nest, so badly built that one could see through the bottom of the nest, but this was quite exceptional, and the characteristic materials showed the ownership at once, even without the presence of the watchful parent birds.

F. C. R. JOURDAIN.

## CROSSBILLS NESTING IN ENGLAND.

## IN SUFFOLK.

ON February 27th I found seven Crossbills' nests in a fir-wood in the neighbourhood of Aldeburgh, Suffolk. In three cases the birds had commenced to sit, while the other four nests were not yet finished. The Crossbills were first seen in the particular locality where the nests were found, about the beginning of November, 1909. They were in four distinct flocks of about eight or ten birds each. At the end of December a bird with a stick in its beak was seen to go into a fir tree, but was lost sight of, and we could find no nest or sign of one at the time. One was, however, subsequently found in this tree and was one of those reported above. Crossbills have certainly not decreased in number, and I am certain there were more nests than the seven I found, as I watched a pair collecting nesting material, and they went away with it in quite a different direction to any of the seven nests I knew of, but I lost them in the tops of the fir trees; and there were certainly other pairs. I notice that they always fly quite straight to the nest when they are building, and seem to take no notice of anyone. All these nests were very high up, and all quite in the tips of the boughs of the Scotch firs. The lowest of the nests was about forty feet and the highest nearer sixty feet from the ground. When the hen is collecting nesting material, the cock bird takes up a position on the highest point of some tree close by. The material used in the present case was the dead bark off lime tree branches, and the cock bird sat on the top of the tree while the hen bird was down below stripping off the bark. As soon as she was ready she made straight for the nest with the cock bird following. Some five or six years ago Crossbills were seen feeding young ones that were able to fly in the same locality, but otherwise, so far as I know, they have not been observed in the neighbourhood.

E. FRASER STANFORD.

## IN NORFOLK AND BERKSHIRE.

ON February 10th, near Thetford, Norfolk, I found a Crossbill's nest with four well incubated eggs and another nest partially built. The birds were very tame and the nests easy to find. On February 16th, near Aldermanton, Berkshire, I found two Crossbills' nests, one with four eggs and the other with five. The latter were quite fresh, but the former were much incubated. In both cases the cock birds were singing in the trees in which the

nests were placed. One of the cock birds was a yellow one. The trees were low, and the nests were well out on the horizontal boughs and difficult to see.

NORMAN GILROY.

#### IN NORFOLK.

ON February 26th, I observed a Crossbill carrying building material near Thetford, Norfolk, and I saw her return three times to the same branch of a Scotch fir growing by the roadside. There was nothing whatever to see of the nest, nor was there on the following day, so she was evidently only just commencing to build. I visited the site again on March 12th, when the nest was plainly visible from the ground. It was placed close to the extreme end of a horizontal branch some eighteen or twenty feet high. On my climbing the tree the bird left the nest while I was still some feet from it. She was of a dirty brown-green colour, not nearly so bright as many that I have noticed. She kept twittering in the branches around me for some time while I examined the nest, which contained three eggs already considerably incubated. I saw nothing of the cock bird.

On March 20th I found another nest about  $1\frac{1}{2}$  miles away from the first one. It also was at the end of a horizontal branch of a Scotch fir, and about twelve feet high. As soon as I tapped a lower branch of the tree, the bird left the nest and made loud cries, which immediately brought what I took to be the cock bird. The pair of them flew round about me the whole time that I was in the neighbourhood, making the same loud incessant crying. Both these birds were green, but I saw a red cock within twenty yards of this same nest. Is it possible there were two hens? The nest contained young, apparently four or five days old. The position of the nest prevented me from counting them, but I was able to watch them from six feet distance. I doubt if they were more than three in number.

The dead wood used by these birds in the construction of their nests gives them the appearance of being old nests, and nobody unaware of this peculiarity would imagine that they were new ones containing eggs or young.

My experience is exactly contrary to that of some ornithologists that I know of, who assert that the cock bird readily betrays the presence of the nest by singing in its immediate locality. I obtained no assistance whatever from the cock bird, in either case, and in fact, as stated above, never saw it at all in the first instance.

J. CUNNINGHAM FORD.

## IRRUPTION OF CROSSBILLS.\*

THERE are further indications from the observations of some correspondents that the number of Crossbills in the country, although still large, has lessened while Mr. J. S. Tulloch's interesting note from Shetland is direct evidence of some of the birds having left the country. On the other hand, the large number of birds still remaining are unlikely now to leave, and many of them no doubt will be found nesting. The history of previous irruptions (although none have probably been so thoroughly recorded as the present one) shows that the birds frequently settle down to breed here and there in the spring following their arrival, but I know of no authentic record of Crossbills having bred for two years in succession in the same locality in England and Wales.

I hope that the readers of BRITISH BIRDS will continue to send in any note of (1) Nesting, (2) Increase or Decrease in Numbers, (3) Arrival in New Localities or any evidence connected with movements of the Crossbills.—H.F.W.

SHETLAND.—"I have not seen or heard of any being seen in the islands since August 21st, 1909, until February 27th, 1910, when I saw a flock of about six near the Knab, Lerwick. The day was bright, with a light southerly breeze. The cries of the birds first attracted my attention, and I saw them flying from a southerly direction and settle in a field. One—a cock—sat on a fence, the others rested upon the ground, but not for long, but long enough for me to get a good look at them with my glasses. They flew off in an easterly direction. I was told by a friend of mine, Mr. Grierson, of Helendale, that he saw a flock of about a dozen on the same afternoon" (*John S. Tulloch*).

BEDFORDSHIRE.—"Whenever I go out purposely (at Woburn) to look for Crossbills, I still (March 2nd) find them. On February 10th I visited a small wood of only a few acres, in which I found at least a dozen on one lot of larches, and between thirty and forty farther on. On the 18th, in a walk of about two hours, I saw flocks of about a dozen, five, and thirty. Since then I have seen one pair quite by themselves, which I hoped might be a breeding pair, but I was unable to find them again. Stewart Stout, Mr. Eagle Clarke's late bird-collector in Fair Isle, who is very well acquainted with them,

\* For previous references to this subject, see pp. 82, 123, 162, 190-4, 226-8, 258-261, 303-6, 331-3.

constantly hears them passing over and sees them." "On March 16th I saw a flock of six and another of seven, and on the 17th a flock of nine or ten. They appear to be less numerous than they were, but it is difficult to be certain, as they seem to have left the larch trees, where they were easily seen, and to have taken to the Scotch firs. One seen March 18th, about a dozen in a flock on March 19th at Woburn, and satisfactory evidence of two other flocks on March 19th at Ampthill" (*The Duchess of Bedford*).

BERKSHIRE.—Five on February 26th at Henley-on-Thames. A good many at Langley, near Slough, towards the end of February. A pair at Henley on March 19th, but no evidence of nesting (*H. Noble*).

GLOUCESTERSHIRE.—Still (March 11th) in fair numbers; appear to be less numerous (March 20th), but this may be because they are in pairs, at Mitcheldean (*N. F. Richardson*).

HAMPSHIRE.—"They have been *common* at Hackwood, Basingstoke, since the first week of July, 1909. About October their numbers were increased, and in November and December, 1909, and January, 1910, they were very common, one could any day see from sixty to one hundred. The majority disappeared about February 1st, but one small lot were seen about February 15th, about six on February 27th, not far away, and two on March 10th at Hackwood" (*W. S. Medicott*).

KENT.—Very plentiful since the autumn at Cranbrook, and were seen on March 13th (*R. E. Cheesman*). Still (March 19th) at Edenbridge (*E. G. B. Meade-Waldo*). A male singing in middle of March at Langton Green, Tunbridge Wells (*E. L. Turner*).

MONTGOMERYSHIRE.—A few all the winter, and still there on March 16th near Churchstoke (*H. E. Forrest*).

NORFOLK.—Seven or eight on March 5th at Northrepps, near Cromer. Seven on March 22nd, three on 23rd, at Keswick, Norwich. First I have ever heard of in this parish (*J. H. Gurney*).

NORTHUMBERLAND.—A flock of about fifteen still (February 17th) in Dipton Woods, near Corbridge-on-Tyne (*J. S. T. Walton*).

SUFFOLK.—Four on February 19th, one on 23rd, none seen since, at Bury St. Edmunds (*Rev. Julian G. Tuck*).

SURREY.—A flock (eight) and a solitary bird on February 27th at Weybridge (*H. R. Tutt*). Two on January 22nd

at Tilford, a party of twelve on January 23rd near Waverley Abbey, a pair on February 6th, near Godstone; none seen in south-east Surrey since. On March 5th and 6th the majority had apparently left the fir-wood country and the east of Farnham, as no flocks were observed and only two pairs and one or two solitary individuals (*Howard Bentham*).

SUSSEX.—A few on July 17th, 1909, in some of the Down Plantations near Brighton (*J. Walpole-Bond*). A male and two females on February 23rd at Cuckfield (*Col. Stephenson R. Clarke*). Still near Horsham, five seen on March 1st, and six on March 2nd (*J. G. Millais*).

YORKSHIRE.—A party about the middle of November and ten on December 15th, 1909, near York (*S. H. Smith, Nat.*, 1910, p. 132).

IRELAND.—Two on March 1st at Morristown Biller, New-bridge, co. Kildare (*Major B. R. Horsbrugh*).

#### TWO-BARRED CROSSBILL IN SCOTLAND.

IN view of Mr. William Evans' notes on this species on p. 306 (*supra*), I write to inform you that a pair of *L. bifasciata* were shot at Dardarroch, Dunscore, Dumfriesshire, on March 1st, 1890. Full details, with plate, will appear shortly in my "Birds of Dumfriesshire."

A record of "a large flock" of *L. leucoptera* near Banff, about 1809 (*Zool.*, 1859, p. 6631), is not mentioned by Mr. Evans, although referred to by Saxby (*Birds of Shetland*, 1874, p. 115).

HUGH S. GLADSTONE.

#### LITTLE OWL IN WILTSHIRE.

A MALE and female of the Little Owl (*Athene noctua*) were shot on the Hampworth Estate, in the south-east corner of Wiltshire, on January 8th, 1910.

F. REYNOLDS.

#### LESSER KESTREL IN YORKSHIRE.

ON October 14th, 1909, I shot, on the Holderness coast, in Yorkshire, a Lesser Kestrel (*Falco cenchris*, Naum.). This bird, which was an immature male, was migrating south, and was, when on the wing, noticeably smaller than the Common Kestrel. The gizzard was full of grasshoppers,

caterpillars and beetles. This is the tenth record in Great Britain of this species and the third in Yorkshire. Of the nine previous examples, six were obtained between February and May and three in October or November. Since this species is a common spring-migrant to the south of Europe, where the majority arrive in February and leave in October, it is not surprising that it should occasionally wander to the British Isles at the migration periods.

CLAUD B. TICEHURST.

#### NESTING OF THE GREY LAG-GOOSE IN ORKNEY.

COMMON throughout the winter in Orkney fifty or more years ago, the Grey Lag-Goose (*Anser cinereus*), which appears to be the only Grey Goose occurring in Orkney, seldom seems to visit the islands now except on migration, so a record of a pair nesting on the mainland of Orkney seems to me to be most interesting. In the summer of 1904 a nest containing six eggs was found at Kaileylang, in the parish of Firth, on land belonging to Mr. Scarth of Binscarth. The nest was situated in a deep depression in the ground, surrounded by very long heather, and the eggs were not taken and in all probability hatched off.

H. W. ROBINSON.

#### RED-BREASTED GOOSE ON THE SEVERN.

A FINE specimen of the Red-breasted Goose (*Bernicla ruficollis*) was shot on the banks of the Severn on November 18th, 1909, and was set up by Mr. Lewis Hutton, Broad Quay, Bristol. It is now in the possession of Mr. H. Knapp, of Salmon Lodge, Oldbury-on-Severn, Gloucestershire, who informs me that it is a splendid specimen in full plumage, and was hardly marked at all by the shot. He presumes it to be a male by the brightness of the plumage, but this is no characteristic of its sex.

H. W. ROBINSON.

#### LINE OF MIGRATION OF THE SPOTTED CRAKE.

WITH regard to my note on this subject (p. 339), I may say that since writing I have seen another Spotted Crake, which was picked up in exactly the same place in the middle of October, 1909, making four specimens in four different years.

H. W. ROBINSON.



## SPOTTED SANDPIPER IN SUSSEX.

A female Spotted Sandpiper (*Totanus macularius*) was shot by Mr. Ayling, at Shoreham, Sussex, on November 27th, 1908. It was seen in the flesh by Dr. H. Langton, Chairman of the Museum Committee, Brighton, and by the Curator. It is in immature plumage.

J. B. NICHOLS.

By the kindness of Mr. Nichols we are enabled to give a reproduction of a photograph of part of the wing of this bird.



It will be seen that the dark brown sub-terminal band on the secondary wing-feathers is even and well marked on all the feathers, whereas in the Common Sandpiper (*Totanus hypoleucus*) the band in the eighth and ninth secondaries is broken, and these feathers are usually irregularly marked with brown and sometimes have scarcely any marking at all. The specimen above recorded is spotted on some of the ventral feathers, but nowhere else on the underside.—H.F.W.]

RARE BIRDS ON THE ISLE OF MAY (FIRTH OF FORTH).—This island was again visited (*cf.* Vol. I., p. 295, Vol. II., p. 346) in the autumn of 1909 by the Misses L. J. Rintoul and E. V.

Baxter, with most interesting results, as the following summary of their observations (*Ann. Scot. Nat. Hist.*, 1910, pp. 4-10) will show :—

EASTERN PIED WHEATEAR (*Saxicola pleschanka*), *cf. antea*, p. 296.

RED-SPOTTED BLUETHROAT (*Cyanecula suecica*). A young bird September 14th, one 17th.

LESSER WHITETHROAT (*Sylvia curruca*). Several September 16th, one 17th, one 22nd, several 24th, two 26th, one 28th, one 29th, one 30th.

BARRED WARBLER (*Sylvia nisoria*). A male, September 13th.

YELLOW-BROWED WARBLER (*Phylloscopus superciliosus*). One September 16th (uttered a loud ringing "pee," audible a long way off), one 24th, one 25th, two 26th, three 27th, two 28th, one October 2nd, one October 24th. The authors remark that they saw at least ten different individuals.

WHITE WAGTAIL (*Motacilla alba*). One September 14th, several 25th, two 26th and 27th.

RED-BREASTED FLYCATCHER (*Muscicapa parva*). One September 25th.

SCARLET GROSBEEK (*Pyrrhula erythrina*). A female, September 13th.

LITTLE BUNTING (*Emberiza pusilla*). One September 25th, one 26th.

GREAT SPOTTED WOODPECKER (*Dendrocopus major*). One September 16th, whether of the British or Continental form is not stated.

RARE BIRDS IN SHETLAND.—Mr. E. Hamilton records (*Ann. Scot. Nat. Hist.*, 1910, pp. 53-4) the following birds which he obtained at Unst during various years. The want of exact data is unfortunate.

GREENLAND REDPOLL (*Linota hornemannii*).—One shot between October 9th and 19th, 1905.

GREATER REDPOLL (*Linota linaria rostrata*).—Several obtained from a flock during October and November, 1907.

TENGMALM'S OWL (*Nyctala tengmalmi*).—A female, apparently uninjured, was captured on a stone-wall on January 8th, 1908. "Its stomach contained the remains of a sparrow."

TURTLE-DOVE (*Turtur communis*).—Two on October 21st, 1907.

GREENLAND WHEATEARS IN SCOTLAND.—Specimens of *Saxicola œnanthe leucorrhœa* are recorded (*Ann. Scot. Nat. Hist.*,

1910), from Mull of Galloway Lighthouse on August 12th, 1909 (p. 55), East Lothian coast, September 25th, 1885 (p. 55); Isle of May, September 20th (p. 5); September 26th (p. 6); October 22nd, 1909 (p. 9).

YELLOW-BROWED WARBLERS IN ROSS-SHIRE.—Miss Annie C. Jackson records (*Ann. Scot. Nat. Hist.*, 1910, p. 55), that she procured a male *Phylloscopus superciliosus* on September 23rd, 1909, on the coast of east Ross-shire, and a female in the same locality on September 27th.

GOLDEN ORIOLE IN DUMFRIESSHIRE.—Mr. Hugh S. Gladstone records (*Ann. Scot. Nat. Hist.*, 1910, p. 56) that an adult male *Oriolus galbula* was caught alive on April 30th, 1909, at Penton Lynns in the parish of Canonbie.

NESTING OF THE GREAT SPOTTED WOODPECKER IN WEST FIFE.—A pair of *Dendrocopus major* are reported by Mr. J. J. Dalgleish (*Ann. Scot. Nat. Hist.*, 1910, p. 56) to have hatched off a brood in 1909 on the Brucefield Estate, West Fife. A specimen of *D. major* was obtained near this estate on April 3rd, 1877, and another on January 25th, 1902.

UNUSUAL NESTING-SITE OF THE TAWNY OWL.—In his "Zoological Record for Derbyshire" (*Derby. Archæol. and Nat. Hist. Soc. Journ.*, 1910), the Rev. F. C. R. Jourdain states that Mr. C. H. Wells found a Tawny Owl (*Syrnium aluco*) "sitting on three eggs on a little ledge in the side of a pinnacle of rocky cliff in Dovedale. Except for a few leaves, the eggs were laid on the rock and the nesting-place was quite exposed." Another Tawny Owl's nest, in a similar site on a rocky ledge near Ambergate, was subsequently found by the same observer.

BLACK-TAILED GODWITS IN CO. CORK.—With reference to this subject (*cf. antea*, pp. 309 and 340) Mr. R. Warren states (*Zool.*, 1910, p. 116) that a flock of eleven *Limosa belgica* visited the mud-banks near Black Rock early in February, 1910, and he assumes that these birds were the same as those seen in October, 1909, and had remained about the harbour of Cork all through the winter.

BLACK-HEADED GULLS NESTING IN TREES.—Mr. Riley Fortune has observed several pairs of *Larus ridibundus* at the Twigmoor Gullery in Lincolnshire nesting in fir-trees. The nests were of considerable size, and in each case the bird was incubating (*Nat.*, 1910, p. 95). The height from the ground of the nests, an important point, is not given, but a photograph accompanying the note shows a nest near the top of a fir-tree. More suitable nesting-sites, Mr. Fortune

says, were at hand. The allied *L. philadelphia*, Ord., habitually nests in trees up to about twenty feet.

SLAVONIAN GREBE BREEDING IN SCOTLAND.—At the meeting of the British Ornithologists' Club held on February 16th, 1910, Mr. W. R. Ogilvie-Grant made the interesting announcement that the Slavonian Grebe (*Podiceps auritus*) had been found nesting on a small highland loch in Inverness-shire in 1908 and 1909 (*cf. Bull. B.O.C.*, xxv., pp. 75-6). Mr. Hugh M. Warrand supplied Mr. Ogilvie-Grant with the following particulars, and lent for exhibition one of the birds which had most unfortunately been shot. Mr. Warrand wrote :—

“The year before last, in the beginning of June, I obtained permission for myself and a friend to fish on a small reedy sheet of water in the hills of Inverness-shire. The day being very warm and bright, few fish were rising, so we landed and lay down by a rock on the shore. While waiting there I observed some bird moving among the reeds near us, and presently noticed that it was swimming round a pile of green reed-stalks like a Coot's nest. At first I thought it was a Coot, but when it came into full view I noticed the peculiar head with its sweeping crests of buff, and knew that it was a bird that I had not seen before. I called the attention of my friend and also of the keeper to it, and we all observed it for some time swimming restlessly about the nest among the reeds and evidently longing for our departure. I regret to say that the next time I saw this Grebe it was lying dead in a bird-stuffer's shop, and I was told whence it had come and who had brought it—facts which have since been fully corroborated. I had hoped that it would have been left in peace to establish a family, and greatly deplored its death. I was cheered, however, to learn the following year (1909) that one or two pairs had appeared on the same loch, but soon afterwards heard that the nests had been ruthlessly robbed by a private egg-collector.”

This is a southward extension of the breeding range of the Slavonian Grebe, which is an annual winter-visitor to Great Britain. It has, however, been suspected of breeding near Gairloch, in Ross-shire (*cf. Saunders*, p. 721, and *Ann. S.N.H.*, 1892, p. 171), and there is considerable, though not conclusive, evidence of its having bred in Benbecula (Outer Hebrides) in 1893, and two were shot in full summer-plumage in April, 1898, in Barra, and another on May 13th, 1907, at Arisaig (Inverness), while others have been observed in Orkney in April, May, and June (*cf. antea*, p. 31).



# LETTERS

To the Editors of BRITISH BIRDS.

“THE NATURAL HISTORY OF BRITISH GAME BIRDS.”

SIRS,—In your issue for March 1st Mr. Ogilvie-Grant criticises certain statements in my work bearing the above title, and describes them as “inaccuracies,” “careless statements,” and “serious omissions.” Under the two first headings he states that he was the first to discover exactly “what took place, and to explain the laws which govern the apparently innumerable variations in the plumage of both the male and the female” Red Grouse.

With reference to this claim, I would point out that Mr. Grant published his views respectively in 1893 and 1894, whilst my book, “Game Birds and Shooting Sketches,” dealing with the subject, and describing in detail the main forms, phases and intermediate types of the Red Grouse, as well as giving illustrations of all these, was published in 1892. My views (pp. 55–58) he seems to have adopted (“Game Birds,” pp. 27–28) as his own, without any acknowledgment of my previous work on the subject.

As “Game Birds and Shooting Sketches” was written principally for sportsmen, I determined that at some future date I would endeavour to collect the substance of certain observations I had been making continuously since 1892, and so published the results last year. During this period I have been constantly shooting Grouse and examining specimens at all seasons of the year. I may say that I have seen tens of thousands of Grouse killed, and have been adding to my notes and collection of these birds, so that now I have a collection that is in my estimation far superior to that in the British Museum.

If Mr. Grant had read my recently published book carefully he would have seen that I do not deny that to a *great extent* the male Grouse breeds in its winter-plumage, but what I have ascertained is that a large number of these winter feathers are shed between February and June (in all cases individual birds are most irregular), and that what he calls an autumn-plumage, and what I assert is a spring dress, consisting of bright and ornamental feathers, comes into the head, neck (and also to the scapulars and rump) before the

beginning of June. Mr. Grant states that I have quite mistaken the meaning of these new feathers, and that, properly speaking, they are only the sombre autumnal dress, which is, roughly speaking, assumed in the end of June. To this I reply that a plumage must be named after the date at which it exhibits itself. This ornamental dress is complete often as early as the end of April (I enclose a few feathers taken from a bird killed last year on April 1st, and these are more than half developed). How then can Mr. Grant call this an autumnal plumage? Late in June the real autumn-plumage appears, when the spring-feathers have faded, and together they remain till the main moult in August-September.

Mr. Grant has suddenly discovered that he knew of this spring ornamental plumage all the time, and which he now calls the autumn-dress, and yet in his "Game Birds" he never mentions it, but says most distinctly (p. 30) with regard to this so-called winter-summer plumage, "When once the winter moult is complete (*i.e.*, November) *no change whatever* takes place in the plumage of the male till the following autumn moult, except that the feathers become bleached and worn at the extremities." This I have characterised as an absolutely incorrect view of the case. I have shown by my descriptions that as early as February and throughout March and April, there is a large assumption of new spring-feathers, which are often quite developed by the middle of April. These are ornamental and become faded and worn before the main flush of the autumn-plumage commences at the end of June. Moreover, other changes are taking place by the moulting of winter-feathers and a complete renewal of the feathers of the legs and feet. If this is what Mr. Grant calls "*no change whatever*," I am at a loss to understand how he made his observations and on what grounds he bases his strange views. According to such an argument, a Knot, which gets its summer-plumage in March and April, is really in autumn-plumage because it sheds its red summer-dress in August. In fact, a male Grouse has to breed in its winter-autumn dress because Mr. Grant says so. As a matter of fact, the male Grouse sheds in September and August a plumage which is a mixture of its winter, spring, and eclipse feathers.

Mr. Grant states that if I had visited the Bird-Room of the Natural History Museum and seen the series of Grouse there represented by 150 specimens, I would at once have seen the error of my ways. In the first place it is nearly impossible to ascertain facts with regard to plumage-change without examining and plucking freshly-killed birds, which I did to the number of fifty between February and July of last

year; and, secondly, I decline to accept Mr. Grant's views on the subject of any of the "Grouse Commission" birds, because apparently he did not himself examine them in the flesh. I have closely examined as many specimens as were necessary for determining what I consider to be the correct summary of all the plumages of the Red Grouse at all seasons, and maintain that my views are accurate. If other naturalists are in doubt as to my conclusions let them begin at the beginning and take a series of freshly-killed birds, not less than ten a month, and publish a report of their observations. On this point I regard Mr. Grant as a prejudiced witness.

With regard to Mr. Grant's objections as to my treating the various local races of *P. colchicus* throughout Central and Northern Asia as sub-species when he himself has gone to such trouble to enumerate them as good species, I can only say that I am sorry that I, in company with a good many other naturalists, dissent from his view. But that Mr. Grant should draw a comparison between the various local races of Pheasants and such widely different birds of separate genera as Black Grouse and Capercaillie I fail to see, for I have distinctly formulated a basis on which I claim that the Colchian Pheasants should be regarded as I have placed them, namely, that the various sub-species interbreed, and that their progeny is again fertile, and so on *inter se* and *ad infinitum*. If birds of such separate genera as Black Grouse, Red Grouse, and Capercaillie do interbreed by chance the results are invariably infertile, and prove their inability to continue such unnatural alliances.

Because some Colchian Pheasants (for instance, *P. c. torquatus* and *P. c. decollatus*) have wandered up a river-system, crossed a mountain-range, and dropped or added white necks owing to certain local conditions conducive to variation, I do not see why they should be regarded as new species. In fact, that is how a sub-specific race is formed. To arguments as to what constitutes a good species and what does not I have listened until I confess I am tired of the subject, and because Mr. Grant differs from me on this point I see no further need of discussion, as we shall not agree.

Lastly, with regard to omissions. Well! what author ever did succeed in raising his work to the level of his ambitions? I should like to have given coloured figures of every change of plumage in the Grouse and every hybrid variety, and immature plumage of all species, as well as eggs and young in down. That is what I should have *liked* to have done, but has Mr. Grant considered that my book cost eight guineas

and that the buying public of such volumes is a small one, whilst very few could afford a higher price. What I try to do, however, is my best, and in doing so I take an infinity of trouble to look at the various aspects of the bird and its life, and to give facts as I have observed them.

J. G. MILLAIS.

Compton's Brow, Horsham.

March 8th, 1910.



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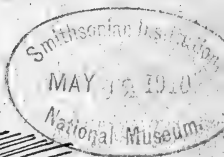
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## ON A WHITE-BREASTED VARIETY OF THE COMMON CORMORANT.

BY

F. W. FROHAWK, M.B.O.U., F.E.S.

AT the meeting of the British Ornithologists' Club held on March 16th, 1910, I exhibited a skin of a female Cormorant (*Phalacrocorax carbo*) with a white breast, which I shot on June 30th, 1909, off the Scilly Isles. I figured and described it in the "Field" of November

13th, 1909, and then stated that, judging from the descriptions given in the leading works on British birds, some confusion appeared to exist respecting the changes of plumage which young Cormorants undergo. Various authors agree in stating that the young in first plumage has the under-parts of a dirty-white, more or less speckled with brown. This is undoubtedly correct, and after the first autumn-moult the under-parts are considerably less white.

When I took my specimen to the British Museum for comparison with those in the collection, I showed it to Mr. W. R. Ogilvie-Grant, who at once pronounced it to be a young bird in its first plumage, notwithstanding the fact that its iris was of a rich blue-green. But on looking through the skins in the collection I was unable to find a similar specimen, excepting a very much smaller bird from India, which had previously been described as a distinct species, but is now considered to be identical with the Common Cormorant.

At the meeting referred to Mr. Ogilvie-Grant stated that he had not the slightest hesitation in saying that my specimen was a young Cormorant still in the plumage of the first year, and that the green colour of the eye did not necessarily imply that the bird was adult, the eye becoming green at the end of the first year. I do not agree with Mr. Grant in either of these statements.

I will here quote Mr. Grant's description of the young and immature Cormorants in the British Museum "Catalogue of Birds" (Vol. XXVI., pp. 346-7):—Young in first plumage (September), general colour above dull brown, glossed on the head, neck and back with bluish-green; feathers of the back, scapulars, and wing-coverts with wide dark margins; throat, front of neck, breast and belly white; sides, flanks, thighs and under tail-coverts dark brownish-black. As age advances the fore-part of neck and chest become brown. In the immature plumage of the second year (September) the upper-parts are more like those of the adult, but less





UNDER-SURFACE AND UPPER-SURFACE OF THE WHITE-BREADED VARIETY OF THE COMMON CORMORANT,  
SHOT BY MR. F. W. FROHAWK IN THE SCILLY ISLES ON JUNE 30TH, 1909.  
*(Photographed from the Skin.)*

brilliant, and mixed here and there with feathers of the first plumage. The feathers of the breast and belly are all broadly tipped with brownish-black, giving these parts a mottled appearance. Immature birds of the third year (May), about twenty-six months old, are similar to the adult, but less brilliant. No mention is made of the colouring of the eyes of the young or immature birds.

The description of my white-breasted example is as follows :—Upper-surface — head, hind-neck, back and upper tail-coverts dusky-brown, glossed with bronze-black ; scapulars and most of the primaries and secondaries ash-grey, the scapulars and secondary coverts margined with bronze-black ; median and lesser wing-coverts variegated with brown, grey, and whitish-buff, the latter being old worn feathers. A few new feathers scattered over the whole of the wings are of a purplish-brown suffused with greenish-bronze and margined with blackish. The tail-feathers are of two different ages. The central pair are bronze-black with pale shafts ; the next pair, only two-thirds grown, are richer bronze-black, with white tips and black shafts ; the remaining ten are old, with faded light buff outer webs and pale shafts. The whole of the under-parts are white ; throat and lower neck speckled with brown and buff, many new feathers. The breast and belly to vent pure unspotted white, mostly new feathers. Sides under the wings, flanks, and thighs deep chocolate-brown, mottled with bronze-black, forming a sharply defined line the whole way down the sides just below the wings, appearing at a short distance as if the entire under-parts were white, the bird looking at a distance like a gigantic Guillemot. On the thighs a patch of a few white elongated feathers, like those of the full breeding-plumage. Bill horn-brown, lower edge of upper mandible and the whole of the base and under-surface of lower mandible pale flesh colour ; the naked skin round the eye dull lemon-yellow, below the eye and surrounding base of bill and gular skin is all brilliant chrome-yellow. Irides of a beautiful rich and rather deep

blue-green ; feet and tarsi purplish-black. Immediately after I shot the bird I made coloured drawings of the soft parts before any possible change of colouring could take place. It is a large female, measuring in expanse  $57\frac{3}{4}$  ins. ; total length,  $36\frac{1}{2}$  ins. ; wing,  $14\frac{3}{4}$  ins. ; girth round middle of body, 18 ins. ; culmen,  $3\frac{1}{8}$  ins. ; tarsus,  $2\frac{3}{4}$  ins. ; outer toe,  $4\frac{1}{2}$  ins. ; weight, 6 lbs. 12 ozs. The stomach was quite empty.

The chief features of the specimen are the colour of the iris, the new white feathers of the under-parts, the appearance of white thigh-feathers, and the different ages of the tail-feathers.

It is quite certain that the bird is not a very young one, and that it is, without the remotest doubt, over a year old, being shot on June 30th, and should therefore have (according to the British Museum Catalogue) all the breast- and belly-feathers broadly tipped with brownish-black, and in the third year the under-parts should be black, like the adult, but less rich.

In reply to my article in the "Field," Mr. J. L. Bonhote contributed some interesting and valuable notes on the subject, which appeared in the "Field" for November 27th. He described the changes of the plumage of a young Cormorant he had in captivity, which was only two and a half months old when he received it, and it was then of a dull brown colour above and white below, flecked with darker feathers ; in the course of a year it moulted slowly between November and March, the back became much darker and greener, and the under-parts dark, but still showing considerable traces of white ; the next year, that is when two years old, the under-parts were entirely black, and the back much as in the adult, but not quite so glossy. The eye, which had hitherto been pale creamy blue, became much greener, although it was not until the third year that the brilliant green eye of the adult was fully assumed. During November and December of the second year several white thigh-feathers appeared. . . .

Although birds in captivity are liable to vary in respect to changes of plumage from those in a wild state, yet Mr. Bonhote's bird appears to have undergone its changes normally.

I subsequently wrote to the "Field" (December 11th), stating that, judging by Mr. Bonhote's description, my white-breasted bird is not a young one, and, if not fully adult, is at least three years old, and belongs to a recurrent form of variation.

This opinion I still hold, and it is strengthened I think by the fact that there are several examples of similar coloration now in the same locality where I obtained mine. In December, 1907, I saw two or three (or possibly more) very large Cormorants with pure white breasts. One morning, when I had not my gun, one of these fine birds flew so close to me that I distinctly saw its bright green eye; its under-parts were of the purest white; and last June I saw several other precisely similar birds.

It is a curious fact that these large white-breasted birds, so far as I can ascertain, escaped notice until December, 1905, when Mr. C. J. King wrote me that he had just seen a strange bird sitting on the rocks; it was black above and white below, the colouring being sharply defined, and he would have taken it for a Great Northern Diver but for the fact that it was sitting on a rock. Since that time they have gradually increased. I should mention that Mr. King has resided in the Scillies for the past twenty years, during which period he has spent much time in observing and photographing the birds of the islands, so he is hardly likely to have escaped seeing such large and very conspicuous birds.

In the accompanying figure of the under-surface the buff and brown speckles have been accentuated in the process of photographing and show up too strongly.

## SEQUENCE OF PLUMAGES IN BRITISH BIRDS.

V.—THE COMMON WHEATEAR, WHINCHAT AND COMMON  
REDSTART.

BY

C. B. TICEHURST, M.A., B.C., M.R.C.S., M.B.O.U.

COMMON WHEATEAR. *Saxicola œnanthe* (Linn.).

**DOWN-PLUMAGE.** Dark grey. *Distribution*—Inner supra-orbital, occipital, humeral, spinal (confined to the middle of the dorsum), and femoral. Moderate length (*cf.* Vol. II., p. 189).

**JUVENILE PLUMAGE.** Acquired while in the nest, the Down-Plumage being completely moulted.

**MALE AND FEMALE.** Whole *head* greyish-brown, the feathers with oval or triangular terminal whitish spots, which in the *superciliary* region form a faint stripe; *mantle* and *scapulars* brown, the feathers with mesial pale streaks and faint, dark terminal bars; *rump* and *upper tail-coverts* white, the feathers with faint, dark terminal markings; *ear-coverts* greyish, the feathers with dark brown edges and tips; *chin* and *throat* greyish-white, the feathers with faint, dark terminal markings; *breast* buffish-white, the feathers with slightly larger and darker terminal markings; *belly* and *under tail-coverts* creamy-white, the feathers with faint, dark terminal markings; *tail-feathers* black, with pale tips, and the basal two-thirds of all white, except the two central ones, which have the basal one-third white; *remiges* brownish-black, edged with buffish- or rufescent-brown on the outer webs, broadly on the inner *secondaries*; *primary-coverts* like the primaries; *greater wing-coverts* brownish-black, with buffish- or rufescent-brown broad edges on the outer webs; *median* and *lesser wing-coverts* brownish-black, with terminal pale buff or cream-coloured spots.

**N.B.**—There is some individual variation in the amount of the pale markings in the *upper-* and dark markings in the *under-parts*; before this plumage is moulted both parts become paler.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the *rectrices*, *remiges*, *primary-* and *greater wing-coverts*.

**MALE AND FEMALE.** Whole *head*, *nape*, *mantle* and *scapulars* brown; *rump* and *upper tail-coverts* white; *superciliary stripe* and line from base of bill cream or creamy-buff; *lores* dusky; *ear-coverts* brown, paler on the lower part; *chin* whitish-buff; *throat* creamy-buff; *breast* darker buff; *belly*, *flanks* and *under tail-coverts* creamy-buff to creamy-white; *rectrices*, *remiges*, *primary-* and *greater wing-coverts* as in

the Juvenile Plumage; *median* and *lesser wing-coverts* brownish-black, edged with buff, paler on the lesser series; *under wing-coverts* and *axillaries* white, mottled with dark grey.

N.B.—There is some individual variation in the tint of the *upper-parts*, in the definition of the *superciliary stripe* and in the colour of the *lores* and *ear-coverts*. There is no constant difference in plumage between the sexes.

**FIRST SUMMER-PLUMAGE.** Acquired in February by moult, which includes all the feathers except the rectrices, remiges, and all the wing-coverts (sometimes the innermost of the greater coverts and rarely also the innermost secondary are moulted), and by abrasion and fading.

**MALE.** Whole *head, nape, mantle* and *scapulars* grey, the feathers washed and edged with brown, and the outer *scapulars* with large blackish centres; *rump* and *upper tail-coverts* white; *forehead* and *superciliary stripe* white; *lores* and *ear-coverts* black, the latter with brownish edges; *chin* whitish; *throat* and *upper-breast* buff; *lower-breast* and *belly* whitish; *under tail-coverts* creamy-buff, sometimes with a few dark markings; *tail-feathers* as in the Juvenile Plumage, but with the pale tips worn off; the whole of the feathers of the *wing* as in the First Winter-Plumage, but browner and with only a trace of the edgings left; the new innermost greater covert and secondary (if renewed) black, not brown, edged on the outer web with buff-brown; *under wing-coverts* and *axillaries* white, mottled with dark grey.

N.B.—The amount of the white on the *forehead* varies, and by the time breeding commences much of the brown wash and edgings of the *upper-parts* has gone, the *ear-coverts* lose the brown edging and the *under-parts* become paler.

**FEMALE.** Whole *head, nape, mantle* and *scapulars* grey-brown; *rump* and *upper tail-coverts* white; *superciliary stripe* and line from base of bill whitish; *lores* dusky; *ear-coverts* brown; *frontal band* creamy-buff to buff-brown; *chin, throat* and *breast* creamy-buff, rather darker on the *breast*; *belly, flanks* and *under tail-coverts* whitish-buff; *tail* and *wings* almost as in the male, but the *lesser coverts* as a rule not quite so dark; *under wing-coverts* and *axillaries* as in the male.

N.B.—The tints of the *upper-parts* and *breast* vary, and by the time breeding commences both *upper-* and *under-parts* become paler. The innermost *greater wing-covert* and *secondary* are rarely renewed.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

**MALE.** *Forehead* greyish, the band over the base of the bill whitish, but variable in size; rest of *head, nape, mantle* and *scapulars* greyish, the feathers washed and edged with buff-brown; *rump* and *upper tail-coverts* white; *superciliary stripe* and line from base of bill white; *lores* black; *chin* whitish; *throat* and *upper-breast* rich buff; *lower-breast, belly, flanks* and *under tail-coverts* whitish to creamy-buff; *tail* as in the First Winter-Plumage; *primaries, secondaries* and *primary-coverts* black, with broad creamy-buff edgings to the outer webs of the innermost two or three secondaries (these are paler and more sharply defined than in the First Winter-Plumage); narrow edgings to the rest; *greater wing-coverts* black, bordered with grey and edged with pale

buff on the outer webs; *median wing-coverts* black, edged with buff, the inner of the series bordered with grey; *lesser wing-coverts* black, edged with buffish-grey or grey.

N.B.—The shade of the brown on the *upper-parts* varies; later in the winter much of this brown edging is lost.

FEMALE. Resembles that of the First Winter-Plumage, and can hardly be differentiated from it, though in some the *wing-coverts* appear to be slightly blacker and the edgings brighter.

ADULT SUMMER-PLUMAGE. Acquired at the same time of year, and by the same processes as the First Summer-Plumage.

MALE. Differs from that of the First Summer-Plumage in the whole *wing* being black, not brown, with only a trace of the edgings left; the renewed innermost *greater wing-covert* black, bordered with grey, and edged on the outer web with grey-buff; and the *breast* being as a rule of a paler buff.

FEMALE. Differs from that of the First Summer-Plumage in the whole of the *upper-parts* being greyer, but not so grey as in the male; the *lores* darker, some almost black, and by the *ear-coverts* being of a darker brown.

#### WHINCHAT. *Pratincola rubetra* (Linn.).

DOWN-PLUMAGE. Grey. *Distribution*—Inner supra-orbital, occipital, humeral and spinal (*vide*, A. G. Leigh, *supra*, p. 153).

JUVENILE PLUMAGE. Acquired while in the nest, the Down-Plumage being completely moulted.

MALE. Whole *head* blackish-brown, with central streaks of buff to the feathers; *nape* mottled with brown and pale dirty buff; *mantle* and *scapulars* dark brown and rufescent-brown, the feathers with central streaks of pale buff; *rump* mottled with two shades of brown, some feathers having pale central streaks; *upper tail-coverts* rufous-brown, the feathers with a few dark spots or bars and rather paler tips; *superciliary stripe* and the line from base of bill dirty white; *ear-coverts* buffish, with dark edges and tips; *chin* dirty white; *upper-throat* and *sides of neck* dirty white, with faint dark edges to the feathers; *lower-throat* and *breast* pale buff, with faint dark edges to the feathers; *belly* and *flanks* buffish-white; *under tail-coverts* buffish-white; *tail-feathers* dark brown, with the basal half white, except the central pair, the outer webs of the outer pair whitish, and pale buffish edges and tips to all; *primaries* and *secondaries* dark brown, with buffish edges to the outer webs and tips, more marked on the inner two *secondaries*, which have also white bases; *primary-coverts* dark brown, with sometimes a little white at the bases of the feathers and faint buffish edges to the outer webs; *greater wing-coverts* dark brown, with well-marked buffish edges to the outer webs, and the innermost two or three feathers with mesial pale streaks; *median* and *lesser wing-coverts* dark brown, with mesial pale streaks and tips; *under wing-coverts* and *axillaries* very pale buffish-white.

FEMALE. Like the male, but as a rule with rather less white at the bases of the inner two *secondaries*.

N.B.—The buffish streaks on the *upper-parts* become greyish-white and the coloration of the *under-parts* becomes paler before the next plumage is acquired.

**FIRST WINTER-PLUMAGE.** Acquired by a complete moult, with the exception of the remiges, rectrices, primary-coverts and the greater wing-coverts (two or three of the innermost greater wing-coverts are moulted).

**MALE.** Whole head blackish, the feathers with pale rufous-brown edgings and faint, pale tips; *mantle* and *scapulars* as the head, but the feathers with broader edgings and more conspicuous tips; *rump* pale rufous, with mesial blackish streaks and faint, pale tips to the feathers; *upper tail-coverts* rufous-brown, with a variable amount of blackish markings and with pale tips; *superciliary stripe* and line from base of bill pale buffish-white; *lores* buff-brown; *ear-coverts* pale brown; *moustachial streak* of dark brown, surmounting a small buffish-white patch; *chin* buffish-white; *upper-throat* pale buff; *sides of neck* pale brown; *lower-throat* and *breast* deeper buff, with pale edges and tips to the feathers and a few scattered dark spots; *belly* pale buff; *flanks* rather darker buff; *under tail-coverts* pale buff; *tail, primaries* and *secondaries* as in the Juvenile Plumage, but with the edges of the feathers slightly worn; *primary-coverts* as in the Juvenile Plumage; *greater wing-coverts* as in the Juvenile Plumage, except the innermost two or three, which are new and have white bases and buffish tips, the innermost feather having more white than the others; *median* and *lesser wing-coverts* blackish, with buffish edgings, the innermost of the series being paler on the edges, and usually showing a varying amount of white.

**FEMALE.** Resembles the male, but may be distinguished by the innermost two or three *greater wing-coverts* having no white and being like the rest of the series, except that they have paler and broader tips and edges, though sometimes the juvenile feathers are retained; by the *median* and *lesser wing-coverts* having no white in the feathers of the inner series, these being instead blackish with pale greyish tips; and by the *breast* nearly always having more spots.

**N.B.**—The coloration of the *throat* and *breast* varies in both sexes. By the end of January this plumage in both sexes is much worn, the buff edgings of the feathers are partly worn off and partly faded to greyish, and the dark part of the plumage is dark brown, and the *under-parts* paler.

**FIRST SUMMER-PLUMAGE.** Acquired by moult (in February), which includes all the feathers except the rectrices, remiges, primary-coverts, and most of the greater wing-coverts: the innermost two or three greater wing-coverts with a variable number of the median and lesser coverts are renewed.

**MALE.** The whole of the *upperside* does not materially differ from that in the First Winter-Plumage, except that the edges of the feathers are paler; *superciliary stripe* and the line from base of bill white and very distinct; *lores* dusky; *ear-coverts* dark brown; a *moustachial streak* of black surmounts a white streak running from the chin to sides of neck; *chin* white; *upper* and *lower-throat* and *breast* rich rufous-buff with no spots; *flanks* and *under tail-coverts* buffish-white; *belly* whitish; *rectrices, remiges* and *primary-coverts* as in the First Winter-Plumage, but paler, and with nearly all the edgings worn off; *greater wing-coverts*, the innermost two or three new and white, with a



varying amount of black on the inner webs, the innermost feather pure white, the rest as in the First Winter-Plumage, but with the edges and tips worn; *median wing-coverts*, a varying number, usually the innermost of the series, are renewed and are white with varying amount of black, the rest as in the First Winter-Plumage, but with the edges and tips worn; *lesser wing-coverts*, usually the innermost of the series (sometimes all) are renewed and are black and white, the innermost pure white, the outer ones mostly black, making with the inner *greater* and *median wing-coverts* a conspicuous white wing-patch.

N.B.—Before this plumage is moulted the *under-parts* become much paler.

FEMALE. The *upperside* with the edgings of the feathers paler than in fresh Winter-Plumage; *superciliary stripe* and line from the base of bill pale buffish-white, more distinct than in the First Winter-Plumage, but not so white as in males or as in adults; *moustachial streak* dark brown, surmounting a smaller white patch than in the male; *chin* buffish; *throat* and *breast* as a rule less rich rufous-buff than in the male, and usually with some dark spots; *rectrices*, *remiges*, and *primary-coverts* as in the First Winter-Plumage, but worn; *greater wing-coverts*, the innermost one or two renewed and showing white at the base, the rest as in the First Winter-Plumage, but the edges worn; *median wing-coverts*, some renewed and black with pale edges, the innermost of the series showing broad white tips; *lesser wing-coverts*, variable number, renewed and black with white tips, those not renewed brown. The female therefore shows a white "wing-patch," but it is smaller and less conspicuous than in the male.

N.B.—The amount of spotting on the *breast* varies, as does the white "wing-patch"; in some females the moult in the *wing-coverts* is confined to a few of the median series, and these consequently show a smaller and less defined "wing-patch."

ADULT WINTER-PLUMAGE. Acquired by a complete moult.

MALE. May be distinguished from that of the First Winter-Plumage by the *primary-coverts* having the basal two-thirds of the feathers white, making another white "wing-patch"; the outer *greater wing-coverts* are blacker, and have the buffish edges to the outer webs and tips paler and narrower, the innermost show more white, as also do the innermost *median wing-coverts*, some feathers being pure white; the inner *primaries* have a greater amount of white at the base than in the First Winter-Plumage.

FEMALE. May be distinguished from that of the First Winter-Plumage by the *primary-coverts* being similar to those in the adult male, as also are the outer *greater wing-coverts*, also the inner two or three feathers are blackish with white bases, but less white than in the male, by the *median* and *lesser wing-coverts* being blacker than in the First Winter-Plumage and the edges narrower, the innermost of both series having also some white in the feathers, but not so much as in the adult male.

N.B.—By the end of January this plumage is much faded and worn in both sexes, and where there are spots on the *breast* these become more conspicuous.

ADULT SUMMER-PLUMAGE. Acquired by the same processes as the First Summer-Plumage.

MALE. Resembles that of the First Summer-Plumage, but may be distinguished by the basal two-thirds of the *primary-coverts* being white; the outer unmoulted feathers of the *greater, median* and *lesser wing-coverts* being black, not brown, the edgings being almost entirely worn off, and by the *lores* being usually blacker.

FEMALE. Resembles that of the First Summer-Plumage, but all the dark *wing-coverts* are blacker and the basal halves of the *primary-coverts* are white.

### THE COMMON REDSTART. *Ruticilla phœnicurus* (Linn.).

DOWN-PLUMAGE. Dark grey. *Distribution*—Outer and inner supra-orbital, occipital, humeral and spinal, well marked and long, except in spinal and humeral tracts, where it is short and scanty (*cf. supra*, p. 151).

JUVENILE PLUMAGE. Acquired while in the nest, the Down-Plumage being completely moulted.

MALE AND FEMALE. Feathers of the whole *head, nape, mantle* and *scapulars* dingy ochreous to ochreous-grey, edged and tipped with brown-black, the bases being French grey; *rump* pale orange-rust, the feathers tipped with brownish-black; *upper tail-coverts* pale rust; feathers of the *chin, ear-coverts, sides of neck, upper and lower-throat* and *breast* pale buffish or dingy white, edged and tipped with dark brown; feathers of the *belly* and *flanks* whitish or creamy-white tipped with dark brown, less so on the *belly* (on the *breast* the dark edges on the feathers form a "horse-shoe" pattern); *under tail-coverts* pale buffish-yellow; *tail-feathers* chestnut, except the two central ones, which are dark brown with chestnut edges to their outer webs at the base; *primaries, secondaries, primary-coverts* and *greater wing-coverts*, dark-brown with rufous-brown edges and tips to the outer webs, more marked on the inner *secondaries* and *greater wing-coverts*, faint in the rest; *median wing-coverts* dark brown with triangular terminal markings of yellowish tipped with brown-black; *lesser wing-coverts* dark brown with pale centres; *under wing-coverts* pale buff; *axillaries* darker buff.

FIRST WINTER-PLUMAGE. Acquired by a complete moult, with the exception of the rectrices, remiges, primary-coverts and most of the greater wing-coverts (the innermost one or two greater wing-coverts are renewed).

MALE. Feathers of the *forehead* and anterior part of *crown* pure white at the base, the terminal halves being French grey tipped with pale brown; feathers of the *band* at base of bill black with brown tips; rest of *crown, nape, mantle* and *scapulars* French grey, the feathers broadly tipped with brown, so that here as on the forehead the brown tips hide the rest of the colours; *rump* pale orange-rust; *upper tail-coverts* pale chestnut; indistinct *superciliary stripe* white, the feathers tipped with brown and grey; feathers of the *lores* with black bases masked by tips of whitish; *ear-coverts* black, tipped with pale buff-brown; *chin* white or buffish-white; *upper- and lower-throat* and *sides of neck* black, masked by broad whitish or buffish-white edges to the feathers; *breast* and *flanks* pale chestnut, the feathers edged with white;

*belly* white; *under tail-coverts* pale buff; *tail, primaries, secondaries, primary-coverts* and *greater wing-coverts* as in the Juvenile Plumage, except for the innermost one or two *greater wing-coverts*, which are new and dark brown, washed with French grey; *median* and *lesser wing-coverts* with a variable amount of dark brown and French grey, faintly tipped with pale buff-brown or brown; *under wing-coverts* and *axillaries* pale orange-buff.

**FEMALE.** Whole *head, nape, mantle* and *scapulars* brown, with a faint vinaceous tint; *rump* pale orange-rust; *upper tail-coverts* pale chestnut; *lores* buffish-white; *ear-coverts* buff-brown; *chin* and whole *throat* buffish-white mottled with brownish; *sides of neck* vinaceous brown; *breast* and *flanks* orange-buff, darker on the *breast*, and the feathers with whitish tips; *belly* whitish; *under tail-coverts* pale buff; *tail, primaries, secondaries, primary-coverts* and *greater wing-coverts* as in the Juvenile Plumage, but the inner one or two *greater wing-coverts* renewed and with less defined edging; *median wing-coverts* brown, faintly tipped with pale rufous; *lesser wing-coverts* grey-brown; *under wing-coverts* and *axillaries* pale buff.

**N.B.**—The coloration of the *breast* and *throat* is very variable, and the inner *greater wing-coverts* are not always renewed, and sometimes the bases of the feathers on the *forehead* are white.

**FIRST SUMMER-PLUMAGE.** Acquired by abrasion and by fading.

**MALE.** *Forehead* and anterior part of *crown* white, band across base of bill black; rest of *head, nape, mantle* and *scapulars* French grey, the last two with the feathers tipped with brown; *rump* and *upper tail-coverts* rather paler than in the Winter-Plumage; *lores* black; *superciliary stripe* white, the feathers tipped with a varying amount of grey; *ear-coverts* black, with trace of brown tips to the feathers; *chin*, whole *throat* and *sides of neck* black, with only a trace of the white edgings to the feathers left; *breast* rich chestnut, with only a trace of the white edgings to the feathers left; *remiges, primary- and greater wing-coverts* have their outer edges narrower and paler; *median wing-coverts* dark brown, washed with grey; *lesser wing-coverts* French grey; rest of plumage much as in the First Winter-Plumage, but worn.

**FEMALE.** The *upperside* has lost the vinaceous tint; the *rump* and *upper tail-coverts* are paler; the *underside* has lost the white edges to the feathers, and the buff has become dingy or a greyish-brown colour; *remiges* and *wing-coverts* have lost much of their edgings, but those left are narrower and paler.

**ADULT WINTER-PLUMAGE.** Acquired by a complete moult.

**MALE.** Differs from that of the First Winter-Plumage in having the feathers of the *head, mantle* and *scapulars* not so heavily tipped with brown, and so showing more of the French grey colour; *lores* and band across the base of bill black, and in many an indication of the white *forehead* and *superciliary stripe* is seen more clearly; *chin* black; *throat* sparsely tipped with white, the edging to the inner *secondaries* paler and narrower and washed with French grey; *greater wing-coverts* all washed with French grey on the outer webs and with faint brown tips; *median* and *lesser wing-coverts* French grey, faintly tipped with brown, this grey on all the *wing-coverts* being much purer than in the First Winter-Plumage.

FEMALE. Resembles that of the First Winter-Plumage, but the tint of the *upperside* is usually slightly greyer including the *lesser wing-coverts*, while the edging on the *greater wing-coverts* is not so pronounced.

ADULT SUMMER-PLUMAGE. Acquired by the same processes as the First Summer-Plumage.

MALE. Differs from that of the First Summer-Plumage by the *greater wing-coverts* having some French grey instead of being all brown; and by the *mantle* and *scapulars* having all the (narrow) brown tips worn off, and so being of a purer grey.

N.B.—The amount of white on the *forehead* varies both in the First and Adult Summer-Plumages.

FEMALE. Scarcely distinguishable from that of the First Summer-Plumage, but the *wing-coverts* are often greyer.

N.B.—Some females in Winter-Plumage show more white on the base of the feathers of the *forehead* than usual, and have in addition a variable amount of blackish concealed markings on the feathers of the *throat*, while the *breast* and *flanks* are of a much richer orange-buff with whitish edgings. The *under wing-coverts* and *axillaries* are also usually of a darker buff. By the wearing of the edges of the feathers these females have in the Summer-Plumage the white on the *forehead* visible, as also the blackish markings on the *throat*, and the *breast* and *flanks* are more or less uniform orange-buff; the colours of the *breast* and *throat*, however, are never so intense as in the male, and the white on the *forehead* is never so extensive or pure. This plumage may be that of very old birds, as was suggested by Yarrell in his "British Birds" (first edition, Vol. I., p. 240), and is apparently the same as that described by Mr. J. H. Gurney, jun., in the "Transactions of the Norfolk and Norwich Naturalists' Society" (January 26th, 1886) as a "Female Redstart assuming the plumage of the male."

# NOTES

## RECOVERY OF MARKED BIRDS.

LAPWING (*Vanellus vulgaris*).—B.B., No. 2941, marked by Mr. Stanley Duncan at Ferriby, Yorkshire, on July 15th, 1909. Recovered (shot) near Broomfleet Island, River Humber, on December 27th, 1909.

This bird was very kindly reported by Mr. L. Charlton.

BLACK-HEADED GULL (*Larus ridibundus*). — Vogelwarte Rossitten, marked as a half-grown nestling at Rossitten, Germany, on July 5th, 1906. Recovered (found dead) near the River Medina, between Newport and Cowes, Isle of Wight, early in March, 1910.

The information of the recovery was very kindly sent to me by Mr. H. G. Jeffery.

HEDGE-SPARROW (*Accentor modularis*).—B.B., No. 991, marked by Miss Annie C. Jackson at Swordale, Evanton, Ross-shire, on November 4th, 1909. Recovered (caught in a mouse-trap) at the same place on March 30th, 1910.

## RECOVERY OF A MARKED SWALLOW.

ON April 12th, 1910, the first Swallow (*Hirundo rustica*) was seen at 4 p.m. passing the house at Huntbourne, High Halden, Kent, which lies in the line of a small migration-route; at 6 p.m. a small flight of Swallows passed over to the north, and from it four birds separated, and after flying round the house and settling on the chimney-pots, finally went to roost in a shed where two pairs bred last year. Two days afterwards I caught a Swallow at roost in this shed, almost certainly one of those that arrived on the 12th, and found it was one which my sister had caught and ringed as an adult bird on May 8th, 1909, the bird having come down one of the chimneys into one of the rooms. I may note that there was no mark or injury of any kind on the leg which bore the ring.

CLAUD B. TICEHURST.

## CROSSBILLS NESTING IN ENGLAND.

## IN HAMPSHIRE.

A FLOCK of fifty to sixty Crossbills arrived on July 5th, 1909, in my neighbourhood, midway between Romsey and Southampton. This flock left and flew off due north, but on July 8th small parties of about eight birds each commenced arriving, and many of these have remained in the neighbourhood during the winter. I left England on January 19th, 1910, and gave instructions that a search was to be made for nests. On my return on April 3rd the Crossbills were in the garden, but I was told that no nest had been found, and as the birds I saw seemed to be in a small flock of five I thought probably they had not nested. The birds have been daily in the garden, and on April 9th I saw a female feeding a very young bird, barely able to fly. I was attracted to them by the curious note of the young bird, which was apparently only just out of the nest. It was very much streaked underneath, and the mandibles were apparently not crossed. It sat fluffed up and shivering its wings while the hen fed it. The latter operation lasted three or four minutes, the hen putting her beak into the little one's and feeding it from her crop. The fir-woods in this neighbourhood are very extensive, and many pairs of Crossbills may have bred without being discovered. Out of the five or six old birds which visit the garden daily I have only seen one cock.

GOLAND V. CLARKE.

FLOCKS of Crossbills frequented the broad belts of Scotch fir all round Rookesbury Park, Wickham, during January and February, 1910, and were still there in March, during which month two nests were found. One of these was quite inaccessible on a thin branch of a Scotch fir overhanging a road and about fifty feet from the ground. The other, which was built some two feet from the crown of a Scotch fir some fifty feet high, was empty when climbed to on April 13th, but it had the appearance of young having been reared in it.

The Crossbills in this neighbourhood are being shot by the fruit-farmers, who accuse them of attacking the buds of fruit-trees.

DAYRELL DAVIES.

SINCE February 13th, 1910, I have been watching Crossbills from time to time in a corner of a "thinned-out" plantation adjoining two roads near Burley (New Forest). The

birds have probably been there all the winter. On March 5th and 12th there were several pairs and several small flocks, and although I strongly suspected nesting, I could get no proof of it. On March 25th, however, I watched a cock bird feeding three young, which were well able to fly, while my wife saw another brood, and on that day and the next I watched seven or eight cock birds, which were singing or feeding alone, and evidently had hens sitting. On March 27th I noticed a third brood of three young, rather younger than the first brood, and also saw a hen bird with a mouthful of lichen. On April 2nd my wife found a nest, while on the next day, when I had the pleasure of the company of Dr. F. Penrose and Mr. Smith Whiting, we watched a pair of birds building at this nest, and found another pair building. We also made sure that there were now at least four broods of young fledged, three of three each and one of four. On April 2nd and 3rd, besides the pairs and broods, there was a flock of twenty to thirty "non-breeding" Crossbills, which I had not noticed before, and I think they were undoubtedly new arrivals, at all events to this particular wood. They seemed to have disappeared the following week.

The cock birds frequently uttered their rambling, warbling song, whether they were in a flock, or nest-building, or with young ones, or alone.

The nests were placed in Scotch firs on the fork of horizontal boughs some thirty feet from the ground and some twelve feet from the trunk. The hen did most of the nest-building, cutting off dead twigs even from the tree in which was the nest, and visiting adjacent deciduous trees for lichen and moss. She worked rapidly, and always flew straight to the nest, although we were in full view. The cock sang or fed, but invariably kept close to the hen and escorted her everywhere. Once, when she was on the nest for some time, the cock was feeding within a yard of her, and directly she left the nest he immediately flew off, dropping the cone he had just plucked and was about to feed upon. Two or three times in the course of half an hour we saw the cock carry stuff to the nest and work it in.

The young are easily distinguished, even without binoculars, by their grey appearance when flying and by their striped under-parts when perched, even at the tops of the trees. Both parents feed the young—the cock being perhaps more assiduous than the hen. The young shiver their wings when being fed or when wanting food, and continually utter a note similar to the "jip" of the old bird, but more feeble and of a more "squeaky" nature. It was a charming sight to see

a cock standing on the upper-side of a twig and feeding two young alternately as they hung back downwards, side by side, immediately under him. The young were fed upon whole seeds of the Scotch fir, and these must be regurgitated from the crop of the old bird since they are only fed at intervals, and evidently a number of seeds are given to them at one feeding; it is not likely that so many seeds could be kept in the old bird's mouth; moreover, I have seen the young fed a considerable time after the old ones have finished feeding themselves. The young were about a month old, and the tips of the mandibles had commenced to grow up and down and overlap each other. They seemed to be insufficiently strong to cut off a cone or to open a closed one, but the young frequently pecked at the half-opened cones as they hung on the trees and appeared to extract the seeds; they also eat lichen, and cut off oak-galls and beechmast and held them down with a foot and pecked at them.

Crossbills are very fond of drinking, and they come down to a pond in a corner of this wood all through the day to drink. Their sociability is very marked—a pair were building within a few yards of a clump of trees in which was a considerable flock of "non-breeding" birds, while already on April 4th two broods of young had joined company and were flying about together, making, with their parents, a respectable flock of eleven.

H. F. WITHERBY.

#### IN KENT.

CROSSBILLS were seen in the woods on Bostal Heath repeatedly during February and March, and on March 19th a nest was found at the end of a bough some thirty feet up a Scotch fir. The nest was kept under observation by Mr. P. B. Smythe, and on March 26th the bird was seen to be sitting. Another nest had a bird incubating on the same date. There were some twelve to fifteen pairs of birds in these woods at the time.

J. BEDDALL SMITH.

#### IN STAFFORDSHIRE.

ON March 14th, 1910, I found a Crossbill's nest, nearly completed, at Stretton Hall, Stafford. The nest was in an isolated clump of Scotch firs, well away from the trunk, about thirty feet from the ground, and easily seen from below. The two Crossbills were in another tree close by, but as soon as I began to climb to the nest one bird flew to the bough that held the nest, chirping loudly, and then both flew right away. The nest was composed of coarse grass and a little sheep's



wool—the best materials at hand. I did not meddle with it, but on coming again a week later I found it had not been touched, and the birds had disappeared.

There have been flocks of Crossbills here since August, 1909. There are considerably fewer now than there were in January; but flocks of about twenty individuals are still to be seen, and many seem to have paired, but I cannot find another nest or distinguish any young birds.

F. A. MONCKTON.

#### IN SUFFOLK.

ON March 27th, 1910, I visited a locality in Suffolk from which I had had reports of large numbers of Crossbills, and judging from the quantity of cones under the trees in every belt of firs visited, they must have been there in hundreds. There were still many birds about at the time of my visit, mostly in pairs or single. I found three nests from which the young had flown in the same belt of Scotch pines. A fourth nest, only about fifteen feet up a Scotch pine, contained four young just hatched out. The female left the nest as I climbed the tree, but was not in the least demonstrative, and the male did not put in an appearance. I carefully examined the mouths of the young; the coloration was very beautiful and was of a pale claret, tinged with purple, or more of a petunia-purple, some parts were fringed or margined with purplish-white, the back of the tongue was orange-purple. On the following day I found another nest containing four young; this was situated on a horizontal branch of a Scotch pine, near the end and about forty feet up, a typical position. During the day three more nests were located, and from their condition must have contained young, a month or six weeks previously. For the foundations of the nests a decided preference was shown for twigs of Scotch pine, in only one of the above nests larch was used; sheep's wool, green moss, and rye-grass were freely used in the construction of the nests, while the lining consisted of very fine rootlets, sheep's wool, and feathers (no hair); measurements 5 inches diameter, 2 to 2½ inches deep, cup 1½ to 1¾ inch deep. All these nests were quite close to a frequented road. In the same locality a nest and four eggs were taken on April 3rd.

PERCY F. BUNYARD.

#### PROBABLE NESTING IN SUFFOLK.

SMALL flocks of Crossbills were noticed from September 21st, 1909, to March 30th, 1910, at Brandon. They continually come to a roof-gutter to drink. Towards the end

of February they began to sing, and early in March we noticed some in pairs, and on March 6th I saw a cock with some duck's feathers in its bill. Some nests in the tops of the pines we take to be theirs, but have not actually seen the birds visit them.

J. M. WILKINSON.

#### IN SURREY.

As it is of interest to report all cases of the nesting of the Crossbill, I give below an extract from a letter I have received from Petty Officer E. Whibley—a very reliable field-naturalist—regarding the nesting of a pair of Crossbills near Witley, Surrey.

Mr. Whibley writes:—"You would like to know about a Crossbill's nest which I found on March 5th. The nest was in a fir-tree growing on the steep bank of the railway-cutting near Witley Station. It was resting on the fork of the outer end of a branch about thirty feet from the ground, and was composed of twigs outside, then coarse grass, and lined with what appeared to be shredded sedgy grass.

"The hen bird was on the nest, and sat very close; she went off very quietly when I climbed along the branch, and I heard no alarm-note, nor saw any more of her. There were three eggs much like those of the Greenfinch in the nest. The cock bird, which was of a dull red on the breast and lower part of the back, I saw just before I got up to the nest.

"The fir-cones of the tree in which was the nest were not touched, but about twenty yards away the ground was littered with cones which the Crossbills had been working at."

H. LYNES.

ON February 19th, 1910, my attention was attracted by the large numbers of fir-cones (evidently "worked upon" by Crossbills) scattered over the ground in a district where coniferous trees abound, in Surrey, within fifteen miles of London. On the 26th I observed a single pair of birds in a small wood and from fifty to sixty in a "toll" of fir-trees a mile away. All were busy feeding at the cones of Scotch pine and larch.

On March 5th the birds were equally numerous, but on this occasion a pair were carrying dead pine-twigs to a lateral branch at the top of a pine sixty feet high, and depositing them on it some seven feet from the trunk. From below, even with binoculars, it was impossible to distinguish the nest, which must have been in the first stages of its construction. A

week later, when Mr. P. F. Bunyard accompanied me, the nest was plainly visible and we saw the hen bird carry some lining-material to it. I climbed the tree a fortnight after the date of the commencement of the nest and found it completed, but the lining had been pulled up into a heap in the centre, and possibly this had been done by squirrels, which here abound. No birds have since been seen near this nest.

On March 12th and 13th we observed two pairs of birds breaking off dead pine-twigs, and carrying them to nesting-sites out on the branches, from thirty to forty feet from the ground. At one of these the birds were not seen again and the nest-foundation never assumed a definite form. The other looked completed on the 19th, when, as we watched it, both birds came into the tree. The female went straight on to the nest and stayed there, but the male flew away. Mr. Bunyard climbed to this nest on the 25th, and found three eggs, incubation having just commenced. Whilst he was examining the eggs both birds flew round his head, uttering a chirping note incessantly. The nest itself was composed of dead pine-twigs on the outside, and a lining of shreds of bast, or inner bark, of birch and other trees, together with fine fibres and two or three feathers. It was rather larger than a Greenfinch's nest and the wall was about as thick.

On March 19th two more pairs were seen with nesting-materials. As in a previous case, one of the nests was only partially completed, but the other seemed nearly finished on the 25th when we saw one bird carry a white feather to it. This nest was placed at the tip of a fifteen-foot branch, and required a fifty-stave ladder to reach it when examined on April 2nd. It was not quite fully lined. No birds were seen near it before the ladder was brought, nor have any been seen there since.

On the same date I discovered another nest, also placed on a branch at a height of about thirty feet, and containing two eggs, on which sat a green bird. She refused to move till my hand almost touched her, and then flew round the nest and over my head uttering the alarm-note. The male also seemed much disturbed, chirping his alarm-note, as he flew about the trees near by. On the 5th this nest contained four eggs, and then the male did not once put in an appearance during the time I was present.

All the nests found were composed of similar materials to those used in the one already described.

Almost every visit we have paid to this district has revealed more birds. On April 2nd and again on April 9th we saw well over a hundred birds, though we did not visit more than half the fir-woods. Throughout they have been in flocks of from eight to twenty, but latterly there have been more single birds and pairs.

I have noticed that when the scales of the cones dehisce, which they often do on one side first, the birds extract the seeds which have not fallen out, but do not trouble to obtain those from the unopened portion. Consequently none of the scales are frayed in these cones.

H. R. TUTT.

#### PROBABLE NESTING IN SURREY.

DURING February and March and up to April 12th, 1910 (since which I have had no opportunity of observing), small parties of Crossbills have frequented the Scotch firs on Shere Heath. Three or four pairs have been going about in couples; one pair frequent a small pond in our garden, which adjoins the heath, and are constantly drinking there. There can be little doubt that they have bred, or attempted to breed, in the neighbourhood, though much watching has not led to their nests being discovered. I have seen no obviously young birds. My brother tells me that on March 20th he saw a pair collecting nesting-material in the garden, and flying with it to the heath. The song is softly modulated and not unpleasant, though it consists of a repetition of the sound "kree," first uttered twice, "kree-kree," and then repeated three times, "kree-kree-kree." I have news of other parties of Crossbills frequenting a larch-wood at Burrows Cross, a mile away, and Peaslake fir-woods, about three miles away.

HAROLD RUSSELL.

#### IN SUSSEX.

ON April 9th, 1910, with Mr. Percy Smythe, who taught me much concerning the nesting-habits of Crossbills, I visited a certain area of St. Leonard's Forest. Our first beat was the edge—Crossbills, it seems, mainly patronize the margin of a wood or spinney, or belts and rows of firs by the roadside for nesting purposes—of a large wood of Scotch firs bordering a by-way. We had not been there long before we heard a song which was new to us. The ordinary "chuking" or "chiking" cry of the Crossbill we were, of course, familiar with, though neither of us had ever heard one sing. Sixty paces on, following up the song, we came up to a male Crossbill, sunning himself and singing at the very

end of a bough, some thirty feet from the ground, which projected out and up from the main stem. As it so happened, on the self-same branch, about four feet from the parent stem, was the nest quite ready for eggs. As I climbed to it the male (which had at first flown off) and female, as well as a third Crossbill, were all very excited, and the owners came very close to me indeed, attitudinising on the adjacent branches and "chuking" their displeasure vehemently and repeatedly. Visiting this nest on April 14th I was disgusted to find that squirrels had preceded me; fragments of eggs alone reposed in the cup of the nest. Externally this nest had a quite marked but rather loose foundation of dead Scotch fir-twigs with a few flakes of wool adhering to them, then a little dried grass, then many thin strips of Scotch fir bark; while the lining was composed of tufts of wool, a few Wood-Pigeon's feathers and a piece or two of string.

Not 150 yards from this nest, Mr. Smythe found another about fourteen feet from the ground and at the extreme end of a dependent branch of a Scotch fir—one of a small clump by the roadside. The lining in this nest was fluffed up, and it never came to anything. It had far fewer twigs than the first found, and was largely made of dried grass with a dead leaf or so, and a few feathers, and was lined with red and white cow-hair in tufts, and a piece or two of thin cordage.

Half-a-mile on, perhaps, as we approached another way-side clump of firs, we heard the voices of two Crossbills "chuking" persistently. They both flew across a field and alighted on the summit of a larch, and finally flew off to a big wood. Mr. Smythe found this nest—also in a roadside tree—near the top (about thirty feet up), but about six feet out on a projecting branch. It contained four nestlings some four or five days old. In any case their eyes were open, and their dull, dark, flesh-tinted bodies were scantily clad with tufts of softly-tinted greyish-brown down. The bill, quite straight, was mainly yellow, *i.e.*, yellow round the edges of the mandibles, fading into greyish-green on the upper one, to flesh-tint on the lower. The interior of the mouth was very noticeable; it was a combination of vivid carmine and purple, the tongue being flesh-coloured. The parents never came near us as we examined them; and when on the 14th I spent some time watching them being fed, I was struck with the cunning, stealthy manner in which the old birds came to the nest; not a note was heard and hardly a flutter of wings as they slipped through the fir-branches to the nest and out again.

On the 15th, working another part of the forest, I found three more nests, two of which held four young, both lots being under a week old, the third five eggs (an unusual clutch with the Crossbill I believe) on the point of hatching. At this last nest I stroked the sitting hen; and, more, after she had hopped off the nest, and when I was examining the eggs, she actually came and perched on my finger. The cock, too, came very close.

All these three nests were in Scotch firs—out on projecting branches near the summit, and on or near a roadside, and it is significant that all six (those of the 9th and 15th) were near a farm or cottage. One of the last three nests was, externally, largely composed of wool, felted into living and dead fir-twigs; in all cases moss and dried grass were used besides, and the lining—always rather scant—was of wool, hair, and a few curly feathers.

During April 14th and 15th I saw some 150 Crossbills in parties of from fifteen to thirty approximately. There seemed to be an even proportion of males and females, and most of the males were in good red plumage. The cock at one nest was, however, of a dull brown with only a tinge of red on the rump and breast. Will these flocks disband and breed later; or are they non-breeders? It appears that but a small percentage of them are nesting, though I have no doubt that scattered pairs are breeding all over Sussex *in suitable districts*.

A word or two on the Crossbill's cries. The usual "chuk" or "chik"—a ticking, metallic note—is uttered either fairly slowly or very fast; a flock gives out a subdued sort of twitter, difficult to describe, but possibly a modification of the "chuk" note; and the male's song (I have heard some singing *in flocks* this April) may be rendered as "chip-chip-chip-gee-gee-gee-gee." It is by no means loud; all the same it is uttered distinctly and is quite characteristic; in point of time and number of notes it somewhat resembles the song of the Reed-Bunting. The young, when nearly fledged, have a sibilant chirp, which soon becomes a distinct "chik," like that of the adults.

JOHN WALPOLE-BOND.

#### IRRUPTION OF CROSSBILLS.

I would ask correspondents to send in future, only notes relating to (1) Nesting; (2) Definitely ascertained increase or decrease in any locality; (3) Arrival in a locality where it is certain they were not present immediately previously.

H. F. W.

- BEDFORDSHIRE.**—On March 28th numbers (probably not less than several hundred) in small flocks about Great Wavendon Wood, near Woburn; only once were two birds seen alone. On March 29th found them equally numerous through Southill and Rowney warrens; one male was in good song, and paying marked attention to a female (*J. Steele Elliott*).
- BERKSHIRE.**—One flying over on April 1st near Reading. Heard flying over on April 2nd at Wellington College (*N. H. Joy*). Two on March 28th and one flying over on April 20th, at Henley-on-Thames (*H. Noble*).
- BUCKINGHAMSHIRE.**—About six on March 20th at Drayton Beauchamp (*C. Oldham*). Several at the end of March at Langley (*H. Noble*).
- DENBIGH.**—Flocks observed up to February 23rd, but not since, at Llangollen (*T. Ruddy*).
- DURHAM.**—About forty from January to March at Darlington (*E. E. Forder, Field, 9, iv., 1910*).
- ESSEX.**—One shot on March 19th at Colchester (*E. Chichester, Field, 26, iii., 1910*). Two pairs (possibly breeding) on March 27th, near Bradfield (*J. Beddall Smith*).
- HAMPSHIRE.**—A pair on April 11th at Woodhay (North Hants) (*N. H. Joy*).
- HERTFORDSHIRE.**—Varying numbers—sometimes as many as fifty—from January 22nd to mid-April in Whippendell Wood, Watford. Many on April 3rd in the plantations near Berkhamsted (*C. Oldham*).
- KENT.**—About twelve on March 14th at Edenbridge. “Several in fairly good song, the notes somewhat resembling those of the Robin, but more broken up” (*H. H. Farwig*). Two on March 27th on Crockham Hill (*H. Bentham*). Flocks of eight and six on March 26th at Seal and one at Wrotham; forty to fifty on March 29th and 30th near Ashford; between fifty and a hundred on March 28th near Maidstone, where a keeper told me that a nest with two eggs was taken in the preceding week; six and two pairs on April 9th at Farnborough (*H. R. Tutt*). Some on March 26th on Hayes Common (*W. N. Rushen, Field, 2, iv., 1910*). Some about March 6th near Tenterden; three or four pairs about from 13th to 23rd; twenty-four in one flock, besides the three or four pairs, on 24th and until 27th; only three seen (probably the three or four pairs still here) on 30th;

at least three pairs on April 3rd; seventeen in a flock, and, I think, the usual three or four pairs on the 9th; about a dozen from 15th to 17th (*Claud B. Ticehurst*).

LINCOLNSHIRE.—During the first fortnight in April I have constantly seen parties of Crossbills in Hartsholme Wood, near Lincoln. I have several times heard the males singing, and have seen pairs apart from the flocks, but have as yet no proof of nesting. I am informed that the birds have been in these woods since the beginning of the year (*Rev. F. L. Blathwayt*).

MONMOUTH.—A small flock towards the end of February near Abergavenny, and two Crossbills on March 27th were observed fighting, and one (a cock) was picked up damaged (*W. Baker-Gabb*).

MONTGOMERY.—Small party passing over on April 16th at Churchstoke (*H. E. Forrest*).

NORFOLK.—Twenty on March 6th at Castle Rising; two pairs on the 19th; twenty on the 20th; six on the 23rd (*N. Tracy*). Still a few at Northrepps on April 4th, and at Keswick on April 8th (*J. H. Gurney*). About forty in Southacre Wood, Swaffham (*G. Holden*).

SHROPSHIRE.—On April 3rd they seemed to have left the neighbourhood of Wenlock, where they had been numerous up to the early part of March, but a small flock was observed passing over to the westward on April 10th (*H. E. Forrest*). February 6th was the last date they were seen at Dowles (*cf. supra*, p. 304) (*J. Steele Elliott*).

SURREY.—About twenty on March 31st, 1910, at Windlesham, on the borders of Windsor Forest. They had been there some time (*B. E. Stilwell*). Six on March 25th on Leith Hill (*H. R. Tutt*). Numerous flocks of sixty and twenty to thirty, many smaller parties and one or two pairs on March 28th on Leith Hill. Frequently heard the song, which was short and feeble, not dissimilar to that of a Bullfinch, but certainly inferior. A pair on March 27th (male singing) and a few on April 3rd near Limpsfield. Four on April 10th at Godstone (*H. Bentham*). Large numbers on March 13th–20th near Weybridge (*J. Beddall Smith*).

SUSSEX.—A pair on March 20th near East Grinstead (*H. Bentham*). A pair on April 3rd at Groombridge (*F. Anderson, Field*, 16, iv., 1910). Since January 14th to April 22nd, in varying numbers up to a dozen at Uckfield, Maresfield, Buxted and Framfield (*R. Morris*).



## BIRDS FEEDING ON FIR-CONES.

BESIDES the Crossbill I have noticed this year Siskins, Chaffinches, Greenfinches, Goldfinches, Marsh-Tits, Coal-Tits, and Blue Tits feeding on the seeds of the Scotch fir. These birds, of course, only feed on those cones which are fully ripe and have opened, and Goldfinches also were evidently picking up the fallen seeds under the trees. The few Lesser Redpolls I have seen were not feeding on these seeds, but the Hawfinch may possibly be added to the list, since I have several times put them out of fir-trees, but have never actually seen them feeding. Crossbills, besides opening the cones they have nipped off, feed, like the other birds, on opened cones without troubling to remove them; I have also noticed that if the cone is not quite ripe, it is only opened down the more convex side, on which side it is easiest to get the seeds out; many small unripe cones have of late been nipped off and dropped without being opened at all.

The question arises in connection with the Crossbill immigration as to whether the seeds of the Scotch fir are more abundant this year or not; of course, one's attention has been drawn to searching these trees more closely this year on account of the presence of Crossbills, and so one has noticed more of the other birds; yet, although Goldfinches pass through here every spring, they usually stop a day only, and I have not seen them feeding on the Scotch firs. This year they remained with us nearly a month, and were very conspicuous, as they were constantly to be seen feeding in these trees.

CLAUD B. TICEHURST.

LIKE Dr. C. B. Ticehurst, I have this spring (early April) seen (in Hampshire) considerable numbers of Greenfinches, Chaffinches and Goldfinches, and a few Bramblings feeding upon the seeds of the Scotch fir, which they can easily extract at this time of year, when the cones are opening and allowing the seeds to drop. Mr. Robert Newstead, to whom I wrote on the subject, kindly informs me that the observation is new to him, and I cannot find that the cones are unusually prolific this year, as one might suspect. It may be, however, that the habit is not unusual, but that it has been noticed through the constant watching of the fir-trees on account of the Crossbills!

H. F. WITHERBY.

## TWO-BARRED CROSSBILL IN SCOTLAND.

As regards my note on p. 375 (*supra*), drawing attention to "a record of 'a large flock' of *L. leucoptera* near Banff about

1809," I am informed by Mr. J. A. Harvie-Brown that after full consideration and investigation he considered this record as imperfect, and as such placed it in square brackets in his "Vertebrate Fauna of the Moray Basin" (1895, Vol. I., p. 300).

HUGH S. GLADSTONE.

#### BLACK-HEADED BUNTING IN SUSSEX.

A MALE Black-headed Bunting (*Emberiza melanocephala*) in full plumage was shot at Little Holm Farm, near Westfield, Sussex, on May 5th, 1909. The bird was examined in the flesh by Mr. W. Ruskin Butterfield.

J. B. NICHOLS.

#### RAVENS IN SHROPSHIRE.

THE attachment of Ravens (*Corvus corax*) to an established breeding-place is notorious, but it is a singular circumstance that a pair of these birds has this year taken up quarters in a certain valley on the Lougmynd, where the last recorded Raven's nest in Shropshire was destroyed in 1884. Whether there be any connection between the original pair and the new arrivals we have no means of deciding.

H. E. FORREST.

#### THE WHITE MARKINGS ON THE HEAD OF THE YOUNG CUCKOO.

THE considerable amount of variation in the white markings on the heads of young Cuckoos (*Cuculus canorus*) seems to

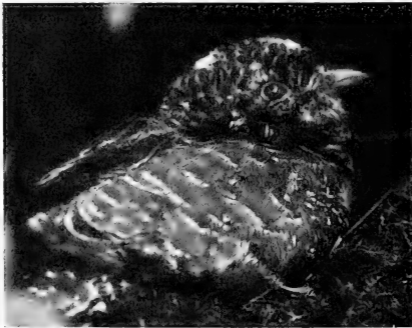


FIG. 1.

me a point well worthy of the attention of ornithologists. I have had opportunities of examining a good many young Cuckoos in the neighbourhood of Bridgnorth during the last few years. I have found that some have a single white spot in the middle of the forehead near the base of the bill, while others have one on the top of the head; others, again, have two spots, one on the forehead and the other on the nape, while sometimes the spot is lengthened into the form of a band-like marking. I have never seen a specimen in which white feathers were absent, although some birds have very



FIG. 2.



FIG. 3.

few such feathers. The accompanying photographs of a few of the young Cuckoos I have mentioned will perhaps, make my meaning clearer. Fig. 1, with two white spots; Fig. 2, with a conspicuous spot on the forehead and two smaller spots at the back of the head; Fig. 3, with a few whitish feathers on the head and throat.

FRANCES PITT.

#### GARGANEY AND OTHER DUCKS IN CHESHIRE.

ON April 9th, 1910, Mr. Travers Hadfield and I had an excellent view of five Garganeys (*Querquedula circia*), two of which were drakes, on the mere at Marbury near Northwich. We first noticed the birds on the wing, when the greyish-white pattern on the wings of the drakes, formed by the blue-grey coverts and white bars, attracted our attention. Later, sheltered by a duck-shooter's reed-screen, we succeeded in getting within ten yards of the birds when they were feeding near the edge of the mere. The drakes repeatedly uttered the curious clicking breeding note, which is likened by Saunders to the sound made by a child's rattle. The general colour of the breast of the drake Garganey is variously described as brown, pale brown, dark brown, sandy-buff, pale chestnut, wood-brown, and pale yellowish-brown in descriptions I have consulted, but we were particularly struck by its vinaceous tinge; Montagu speaks of the "purplish" neck, but this tinge is, in some lights, noticeable on the breast. The Garganey, though it has been obtained occasionally on the Dee Estuary, has not to my knowledge been previously observed on inland waters in Cheshire.

On the 9th, beyond a few Mallards, Pochards and Tufted Ducks, there were no other ducks on Marbury, but on the 10th, when Mr. A. W. Boyd visited the mere to see the Garganeys, he found four Wigeon, ten or more Shovelers, a Sheld-Duck, and over thirty Teal.

T. A. COWARD

#### COMMON SCOTER AND OTHER DUCKS IN HERTFORDSHIRE AND BUCKINGHAMSHIRE.

ON the morning of April 10th, 1910, there was a bunch of ten Common Scoters (*Edemia nigra*), comprising seven adult drakes and three grey-checked birds, on one of the reservoirs at Tring (Herts.). Five more—three of them adult drakes—were on another reservoir, and at Weston Turville (Bucks.), some four miles away, there were eleven, seven adult drakes and four grey-checked birds. One may perhaps expect to see Common Scoters, on passage, on our inland waters in April—I saw

two on Ruislip Reservoir (Middlesex) on April 24th, 1909—but the occurrence of such a considerable number of birds in a limited area may be thought worth recording. The wind, which had for some time previously been easterly, shifted to the N.W. on the 9th, and was light from the S.W. on the 10th. The advent of the Scoters was probably due to this change. Not one of the birds was feeding while I watched them, and their behaviour—dozing on the water or at the most paddling idly—suggested that they were resting after a prolonged flight. Their presence in the district was possibly only a manifestation of an extensive migratory movement in which other species of ducks were involved, for at Tring there was an adult drake Goldeneye (*Clangula glaucion*) accompanied by a brown-headed bird—obviously, from its inferior size, a duck—three or four pairs of Teal (*Nettion crecca*), several Shovelers (*Spatula clypeata*) and, scattered over the waters, perhaps thirty Wigeon (*Mareca penelope*); whilst at Weston Turville there was a flock of eight restless Wigeon that were frequently on the wing. I saw no birds of any of these species when I was passing the reservoirs on April 3rd.

CHAS. OLDHAM.

#### COMMON SCOTERS IN CHESHIRE.

ON April 10th, 1910, I saw six Common Scoters on Radnor Mere in Alderley Park, Cheshire. These birds were evidently on migration, and were already gone on the 11th. The reports of Scoters on inland waters in the south at about the same time seem to indicate that a general movement was in progress.

M. V. WENNER.

#### RINGED PLOVER NESTING IN SURREY.

WHEN at Frensham on May 30th, 1909, I was not a little surprised on discovering that a pair of Ringed Plovers (*Ægialitis hiaticola*) had remained to breed in the neighbourhood, as there is no earlier record of the species having nested in Surrey, and hitherto it appears only to have visited the county as a somewhat casual spring and autumn migrant, although doubtless known instances of its occurrence have occasionally been allowed to pass unrecorded.

Adjoining Frensham Great Pond, a lake of some 100 acres in extent, is a wide expanse of uncultivated land, thinly covered with short grass and stunted heather. On this ground, at a spot about 300 yards from the margin of the lake, the bird had selected a site thickly strewn with small pieces of

burnt wood—bleached to an almost white colour—and chips of bone, forming a circular patch some ten feet in circumference, so that the environment of the nest corresponded in some degree with that usually chosen in maritime localities.

The nest contained four eggs on May 30th, but as I was prevented from visiting the district again until the middle



NEST OF RINGED PLOVER, FRENESHAM, SURREY,  
MAY 30TH, 1909.

(Photographed by H. H. Farwig.)

of July, when no trace could be found of the Ringed Plovers, I am unable to say whether they were successful in rearing a brood.

HOWARD BENTHAM.

#### FULMAR IN SHROPSHIRE AND OTHER COUNTIES.

I HAVE just obtained for the county museum an example of the Fulmar (*Fulmarus glacialis*), which was found in a dying state two miles south of Shrewsbury about the middle of March, 1909. It is an example of the light-coloured phase. The plumage bears evidence of severe buffeting, so that the bird had evidently been driven thus far inland by tempestuous weather. This is the first occurrence in Shropshire, and it is distinctly rare in the western counties, as will be seen by the following summary of recorded occurrences:—Cumber-

land, 3; Lancashire, 4; Cheshire, 2; Denbigh, 1; Merioneth, 11; Cardigan, 2 or more; Pembroke, 1; Gloucester, 3; Oxford, 2; Worcester, 1; Hereford, 2 or 3. None has been recorded in Anglesey, Carnarvon, Flint, Montgomery, Radnor, Brecon, Glamorgan, Carmarthen, Warwick, or Stafford. It will be seen that nearly all occurrences have been either along the seaboard or within sight of the Severn Estuary. Mr. J. Steele Elliott tells me that an old man near Bewdley has an ancient specimen, said to have been obtained on the Severn between Bewdley and Arley. If correct, this bird might be claimed by no less than *three* counties which meet there—Worcester, Salop, and Stafford! H. E. FORREST.

[THE Fulmar has once been recorded from Staffordshire (*Zoologist*, 1863, p. 8448), and there is one recorded from Derbyshire (*Zoologist*, 1850, p. 2951). Few birds are more exclusively pelagic in their habits than the Fulmar, and its presence inland appears to be due to stress of weather alone.

F. C. R. J.]

GREENLAND WHEATEARS IN SCOTLAND.—The date of the example recorded from Mull of Galloway Lighthouse (*cf. supra*, p. 379) should be September 12th, not August 12th (*Ann. S.N.H.*, 1910, p. 118).

WHITE-SPOTTED BLUETHROAT IN FAIR ISLE.—An adult male *Cyanecula wolfei*, in full summer-plumage, is recorded by Mr. Eagle Clarke (*Ann. S.N.H.*, 1910, p. 67) as having been obtained in Fair Isle in 1909. Unfortunately, Mr. Clarke does not give the date of its capture—a curious omission.

MOUTH-COLORATION OF THE NESTLING YELLOW BUNTING.—*Correction*.—Mr. A. G. Leigh writes us that by a mistake in transcribing his original notes he gave the coloration of the inside of the mouth of this nestling (*antea*, p. 154) as lemon-yellow instead of pink, which is the correct colour.

PHOTOGRAPHIC EXHIBITION.—Messrs. Sanders & Co. inform us that the first of their series of Exhibitions in Natural History Photography will be a collection of pictures by Mr. Richard Kearton, to be opened on May 18th, at 71, Shaftesbury Avenue. Admission on presentation of visiting card. Amongst others who have promised their collections for future exhibitions are Miss E. L. Turner, Mr. Oliver G. Pike, and Mr. R. B. Lodge.



# REVIEWS

*A History of Birds.* By W. P. Pycraft. Illustrated. (Methuen & Co.) 10s. 6d. net.

MR. PYCRAFT has produced an extremely interesting book, and, besides this, one which throws new light on some important questions. The plan which he has followed is one which, unfortunately, has up till now but rarely commended itself to writers of books on natural history. He does not merely describe structure and habit, and call upon us to wonder at what is curious, but he asks perpetually *Whence?* and *Why?* And this gives to the book an exceptional interest. To Mr. Pycraft the bird is a metamorphosed reptile. The acquisition of the power of flight has dominated everything, so that variations have been confined within narrower limits than is the case with mammals. The necessity of flight has allowed none to deviate very far, though some few species, after aspiring to the realms of air, have lapsed to earth again. Hence the great difficulty of the classification of birds: the number of forms is vast and the differences by the light of which they can be divided and subdivided are small. However, the subject of classification is well and clearly dealt with by Mr. Pycraft, and when his account of it is read in connection with a later chapter on convergent evolution, the interest becomes very great. When the comparatively conservative muscles and viscera are examined rather than the comparatively plastic bony framework, new relationships come to light: the Owls, for example, have to be severed from the Hawks and become the kin of the Nightjars.

Mr. Pycraft writes of geographical distribution, the effect of moisture and temperature, migration, the relation of birds to the animate environment (they pollinate flowers, they distribute seeds), peculiar inter-relations (*e.g.*, between Bee-eaters and Bustards), gregarious habits, nidification, care of offspring, phases of plumage (a subject in which he has made original investigations), natural selection (its methods of working are well described), sexual selection, isolation, adaptation. Since these are only some of the subjects treated of,



and since in illustration of each a mass of facts is adduced, it goes without saying that occasional slips have been made, and that all critics will not assent to everything. Under the former head we may mention that experiment has revealed in the *Apteryx* a wonderful power of detecting earthworms, and, apparently, by the use of its olfactory powers. By way of criticism we may point out that Mr. Pycraft has not explained with sufficient fulness all that inevitably follows from the acquisition of the power of flight. For example, the head had to be lightened. Hence the loss of teeth, for strong teeth involve strong and heavy jaws. Hence, for some species, the necessity of a strong-walled gizzard. With the acquisition of great mobility came the need of a strong voice to keep the flock in touch with one another or to bring the sexes together. And so from silent reptiles have come loud-voiced birds. After an admirable survey of the facts comes a very inadequate theory of sexual selection. It is true that for a species any display, poor or splendid, may do, but as soon as variation in the direction of fine plumage has begun, it will not do for an individual cock-bird to be dowdy. Hence male finery must be definitely due to sexual selection, and not merely to the absence of natural selection. Of pairing and polygamy no explanation is offered. Surely the constancy of mate to mate is due to the fact that in the monogamous species the assistance of the male is required for the rearing or defending of the young. Lastly, it may be mentioned that the index is very far from complete. But, summing up, we may describe the book as a vast collection of facts illuminated by stimulating theory. The illustrations are many and nearly all of them excellent.

F. W. H.



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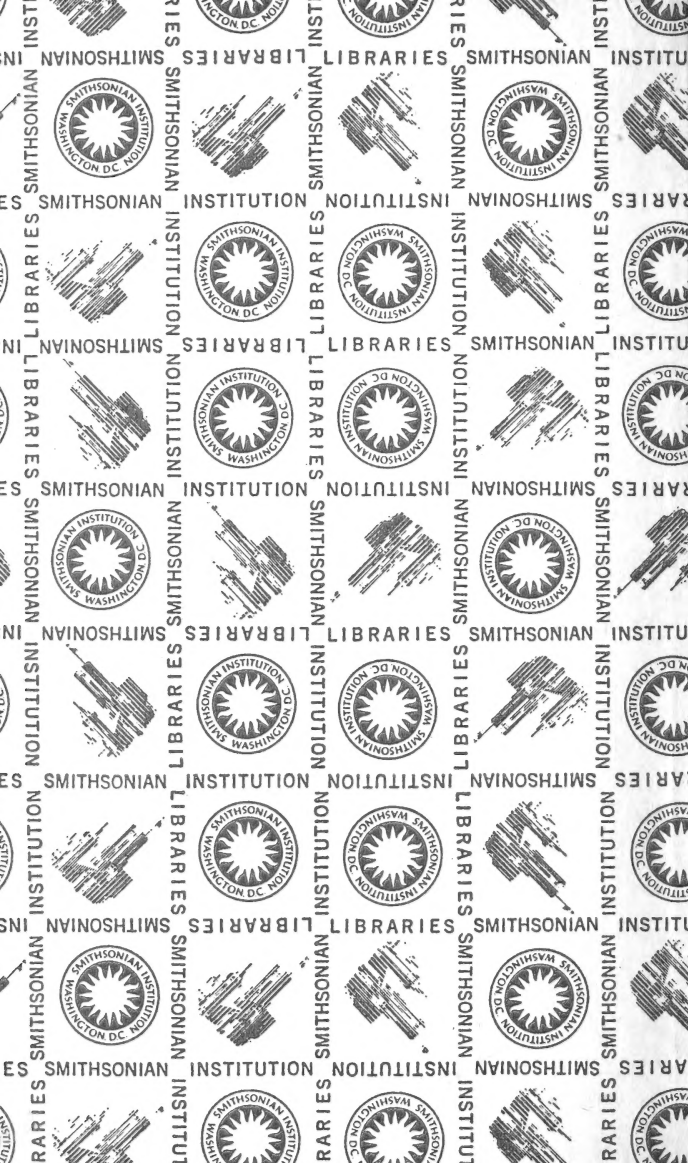
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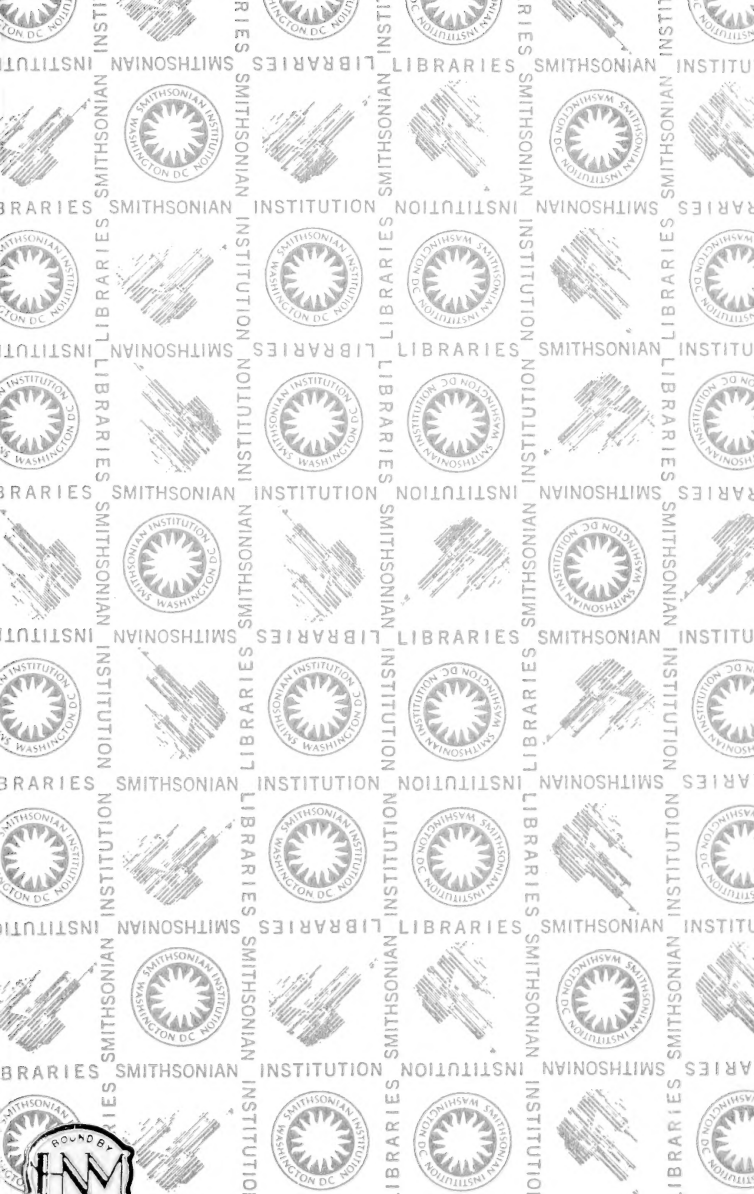












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