

In Twelve Sections.

THE

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BRITISH BIRD BOOK

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200 PLATES IN COLOUR AND
NUMEROUS PHOTOGRAPHS,

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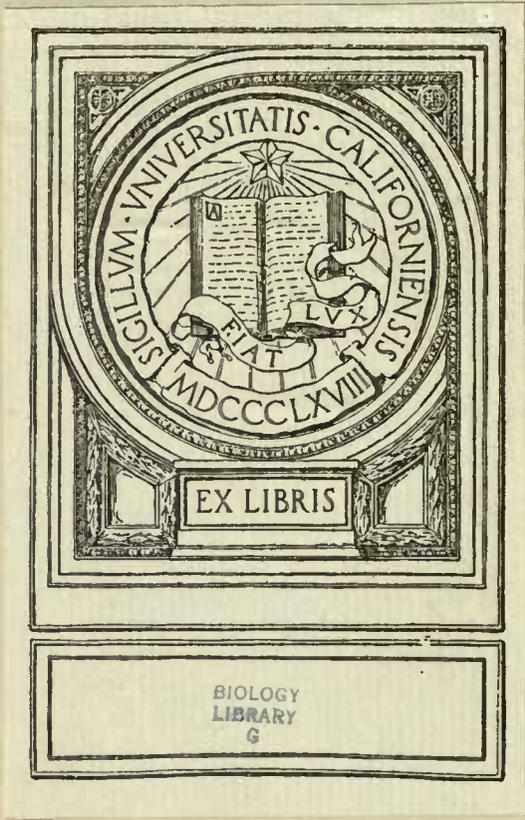
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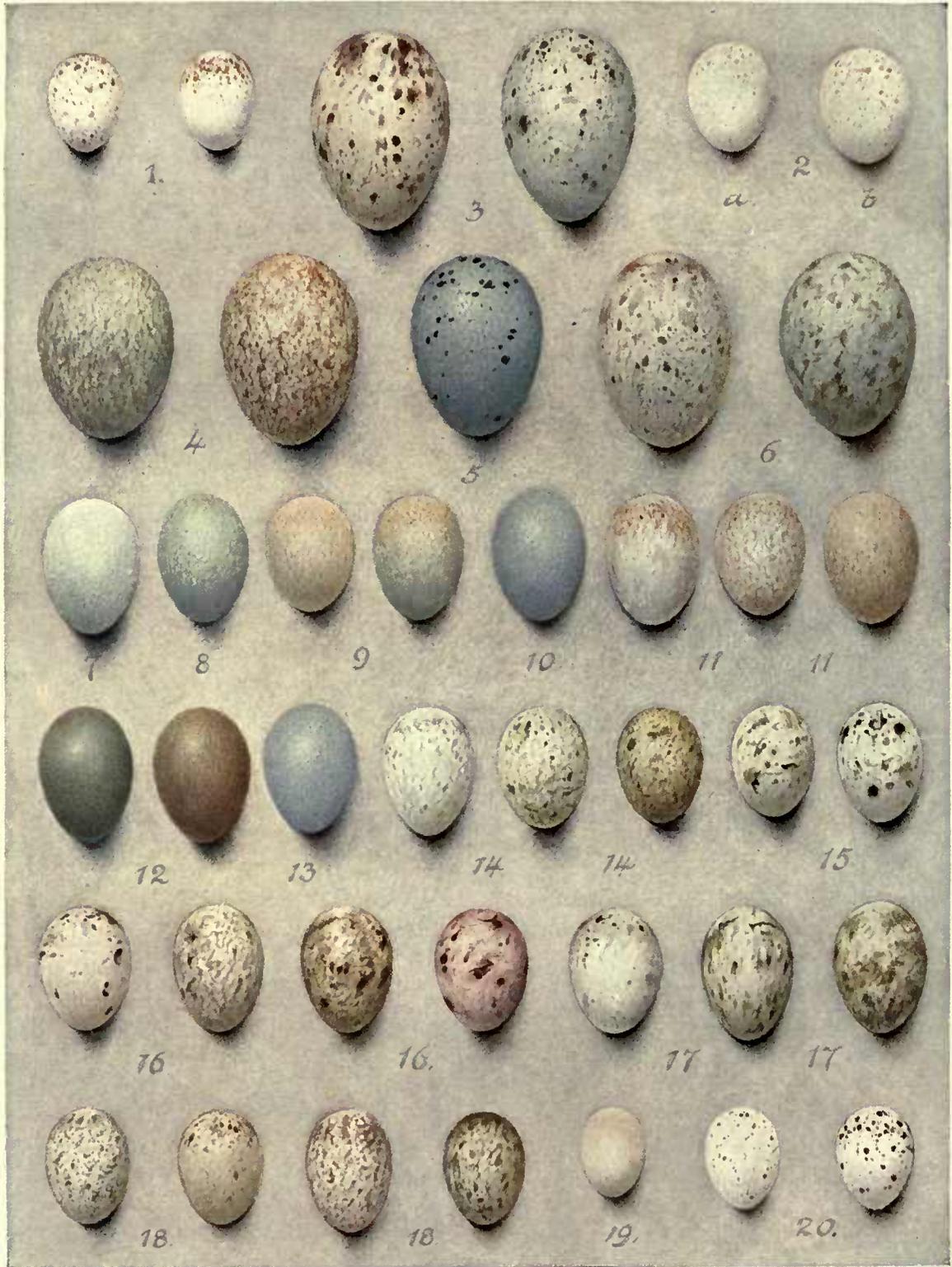
A COMPLETE WORK ON THE BIRDS, NESTS
AND EGGS OF GREAT BRITAIN

London and Edinburgh ~ T. C. & E. C. JACK



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Egg Plate C

By H. Grönvold

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|-----------------------|------------------------|
| 1. Tree-creeper | 11. Robin |
| 2. { 2 a. Wren | 12. Nightingale |
| { 2 b. St. Kilda Wren | 13. Hedge Sparrow |
| 3. Mistle-thrush | 14. Whitethroat |
| 4. Blackbird | 15. Lesser-whitethroat |
| 5. Song-thrush | 16. Blackcap |
| 6. Ring-ouzel | 17. Garden-warbler |
| 7. Wheatear | 18. Dartford-warbler |
| 8. Whinchat | 19. Goldcrest |
| 9. Stonechat | 20. Chiff-chaff |
| 10. Redstart | |

(Natural Size)

THE DIPPER OR WATER-OUZEL

[ORDER: *Passeriformes*. FAMILY: *Cinclidæ*]

PRELIMINARY CLASSIFIED NOTES

[F. C. R. JOURDAIN. F. B. KIRKMAN. W. P. PYCRAFT. A. L. THOMSON]

DIPPER [*Cinclus cinclus britannicus* (Linnæus) [*C. aquaticus*, Bechst.].

Water-ouzel, water-crow, water-pyot or pyet, willy-fisher, water-drill, donk, water-blacky. In the Highlands often called kingfisher (Harvie-Brown). French, *aquassière*; German, *Wasserstar*; Italian, *merlo acquajolo*].

1. **Description.**—Rather less than a thrush in size, it may be distinguished by its dark coloration contrasting with a conspicuous front of white extending from the base of the beak to the breast, and by the shortness of the tail and wings. (Pl. 33.) The upper part of the head, to the level of the lower margin of the ear-coverts, and hind-neck are of a uniform sooty brown colour, the rest of the upper parts dark lead-grey laced with black: except the major coverts which are black, with narrow bluish grey outer margins, and the wing quills, which are black, relieved on the secondaries by faint bluish grey outer edges. The under parts, from the beak to the fore-part of the breast, are pure white, and beyond this is a more or less conspicuous patch of chestnut, which may extend backwards on to the fore-part of the abdomen. The flanks are of a dark slate colour, the abdomen black, under tail-coverts dark grey tipped with brown. The juvenile plumage differs conspicuously from that of the adult in having the under parts of a uniform cream colour, each feather showing a narrow marginal fringe of grey, giving a mottled appearance to this region. The upper parts are of a greenish grey laced with black—that is to say, each feather has a narrow marginal fringe of black. The median and major wing-coverts have a more or less conspicuous sub-terminal crescentic band of greenish grey on a ground colour of dull black. [W. P. P.]

2. Distribution.—This is a sedentary bird, divided into numerous local forms, which inhabit the mountainous districts of the British Isles, Continental Europe, Corsica and Sardinia, Cyprus, North-west Africa, and Asia. Our British race (*Cinclus cinclus britannicus*) is confined to the hilly districts of England, especially the Pennine, Cumbrian, and Devonian systems, Wales and Scotland, including the Hebrides and Orkneys. In the midland plain and the south-east of England instances of its breeding are quite exceptional. The Blackbellied or Scandinavian (*C. cinclus cinclus*), Pyrenean, North African, Central European, Alpine, Sardinian, Palestine, Cyprian, and Caucasian birds have all been described as sub-specifically distinct. [F. C. R. J.]

3. Migration.—Resident. In hard weather our birds forsake their hill streams and are then found in lowland and coast districts, but there is no evidence of any true migration. Examples of the Scandinavian race (*C. cinclus cinclus*), however, sometimes occur as migrants on the eastern seaboard of Great Britain (cf. Nelson, *B. of Yorks.*, p. 104; and Stevenson, *B. of Norfolk*). [A. L. T.]

4. Nest and Eggs.—Nesting place: usually close to rapidly running water, sometimes against a rock overhanging the stream, in a hollow in a wall or under a bridge, even under a waterfall, and less frequently among tree roots, occasionally in trees, on stumps or boulders projecting from the water, among ivy on the side of a tree, not infrequently in a culvert or on the girders of railway bridges. It is globular in shape, but varies somewhat according to the exigencies of the site, and has a flattened opening at the side, sheltered from above. The true nest is not unlike that of the blackbird; it is placed within the mossy covering, and built chiefly of dry grasses, and usually lined with dead leaves, preferably of the beech, but also occasionally of the oak. Exceptionally nests have been recorded in which moss was replaced by water weeds (Rodd, *Birds of Cornwall*, p. 30). The lining of leaves is also sometimes absent, and Macpherson (*Vert. Fauna of Lakeland*, p. 103), mentions a nest lined with feathers. (Pl. XII.) Both sexes share in the construction. Eggs, 4 to 6, pure white, without gloss. Average size of 100 eggs, 1.03 × .71 in. [26.13 × 18.1 mm.]. The breeding season is rather variable, old birds occasionally breeding in February and early March, but the most usual time is late in March and early in April. Both sexes incubate, and the period lasts from 14-17 days. Two and occasionally three broods are reared in a year, sometimes in succession from the same nest. [F. C. R. J.]

5. Food.—Insects, chiefly aquatic, spiders, small crustaceans such as waterfleas, soft-shelled molluscs, the hard undigested portions being regurgitated



Photo by E. A. Wallis

Dipper's Nest. A typical site

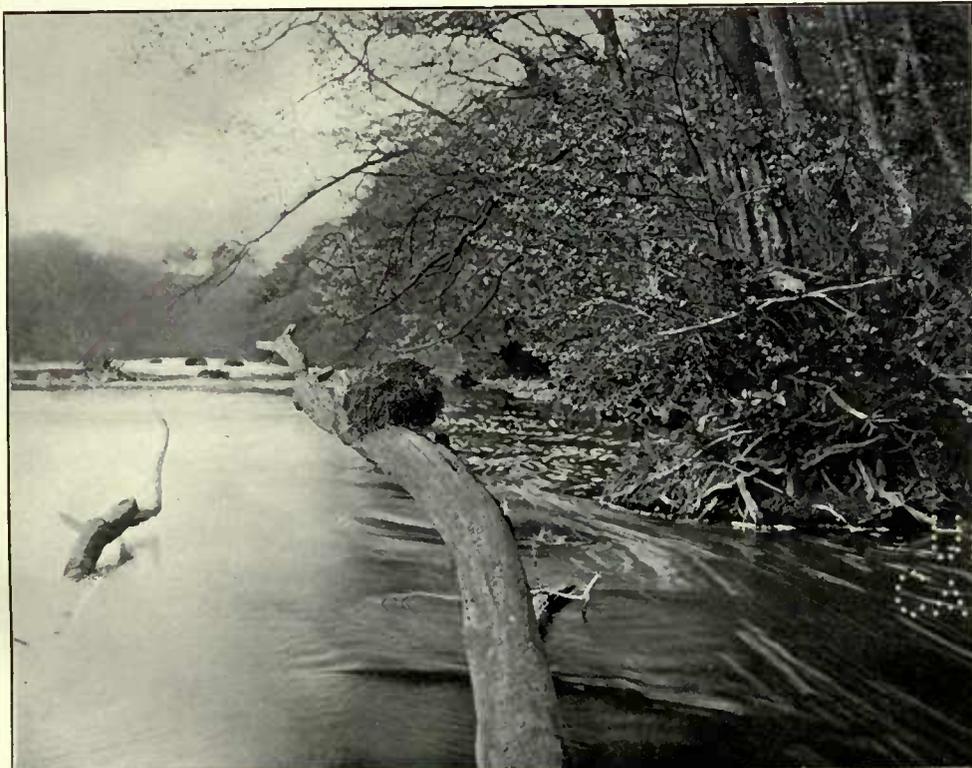


Photo by Kiley Fortane

Dipper's Nest on a trunk projecting from the water

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in the form of pellets. As a result of repeated post-mortem examinations, also of observations of the living bird, it has been shown that it rarely eats fish-fry, and never the ova or spawn (Naumann, vol. ii. pp. 211, 213 (several authorities given); *Proceedings of the Zoological Society*, 1865, 49-52 (Dr. E. Crisp); *Zoologisches Garten*, 1880, 65-70 (K. Müller); Newton's *Dictionary of Birds*; Yarrell, *History of Birds*, i.). It will feed on dead trout (*Field*, 1898, xcii. 608). Its presence on trout or salmon streams is far more valuable than otherwise, as it destroys insects injurious to spawn (Newton, *op. cit.*). The young are fed by both parents, but on what food is not recorded; it is probably the same as that of the adults. [F. B. K.]

6. Song Period.—More or less at all seasons, but chiefly in winter and spring. It begins "recording" after the autumn moult, as early as September. It has been heard to sing at night (Ussher and Warren, *B. of Ireland*). [F. C. R. J.]

THE IRISH DIPPER [*Cinclus cinclus hibernicus*, Hartert.] This has been separated sub-specifically by Dr. Hartert, as it has "wider black borders to the feathers of the upper side than *C. c. cinclus*, and *C. c. britannicus*, so that the back appears almost uniform black in freshly moulted examples, and the rufous pectoral area is more restricted than in *C. c. britannicus*, but wider than in typical *C. c. cinclus*" (*British Birds*, iv. 136; E. Hartert, *Vögel der Paläarktischen Fauna*, i. 790). It is confined to Ireland. [F. C. R. J.]

The following sub-species is described in the supplementary chapter on "Rare Birds" :—

The Scandinavian or Blackbellied Dipper, *C. cinclus cinclus* (Linnæus),
(*C. melanogaster*, Brehm).

THE DIPPER

[F. B. KIRKMAN]

If you will walk quietly along the banks of a rapidly flowing brook or shallow river, choosing one well strewn with moss-clad rocks, you may chance to see, perched in mid-stream on some jutting boulder, a small bird, not as large as a thrush, but much more rotund in its build, and having, at a distance, all the appearance of being clad in evening dress, white shirt front and black suit complete, but with the coat-tails unconventionally truncated and projecting stiffly in a horizontal or upward direction. Watch this portly little body and you will see him curtsy this way and that way, with downward jerks of the tail, and then, if not alarmed, wade perhaps into the water up to his white front or even up to his neck, when he will sink and disappear beneath the surface, to emerge shortly afterwards none the worse, and showing no trace of immersion except a few shining beads of water that roll like quicksilver off his back.

The performer of this feat is the *dipper* or *water-ouzel*, the former name having apparently been given it in 1804 by the author of Bewick's *British Birds*, from the curtsy or dipping motion already alluded to, and not, as is generally supposed, because of its habit of dipping or diving into the water.¹ To give it the name on account of the latter habit would, moreover, be to lay stress on what is not a marked peculiarity of the bird. It does dive into the water, especially after alighting on its surface, and also when floating or swimming,² but, when wading in, it frequently, if not habitually, submerges itself without any visible dip. "We have," writes Montagu, "seen the water-ouzel walk into the water, and, as it were, sink beneath the surface, as if its specific gravity

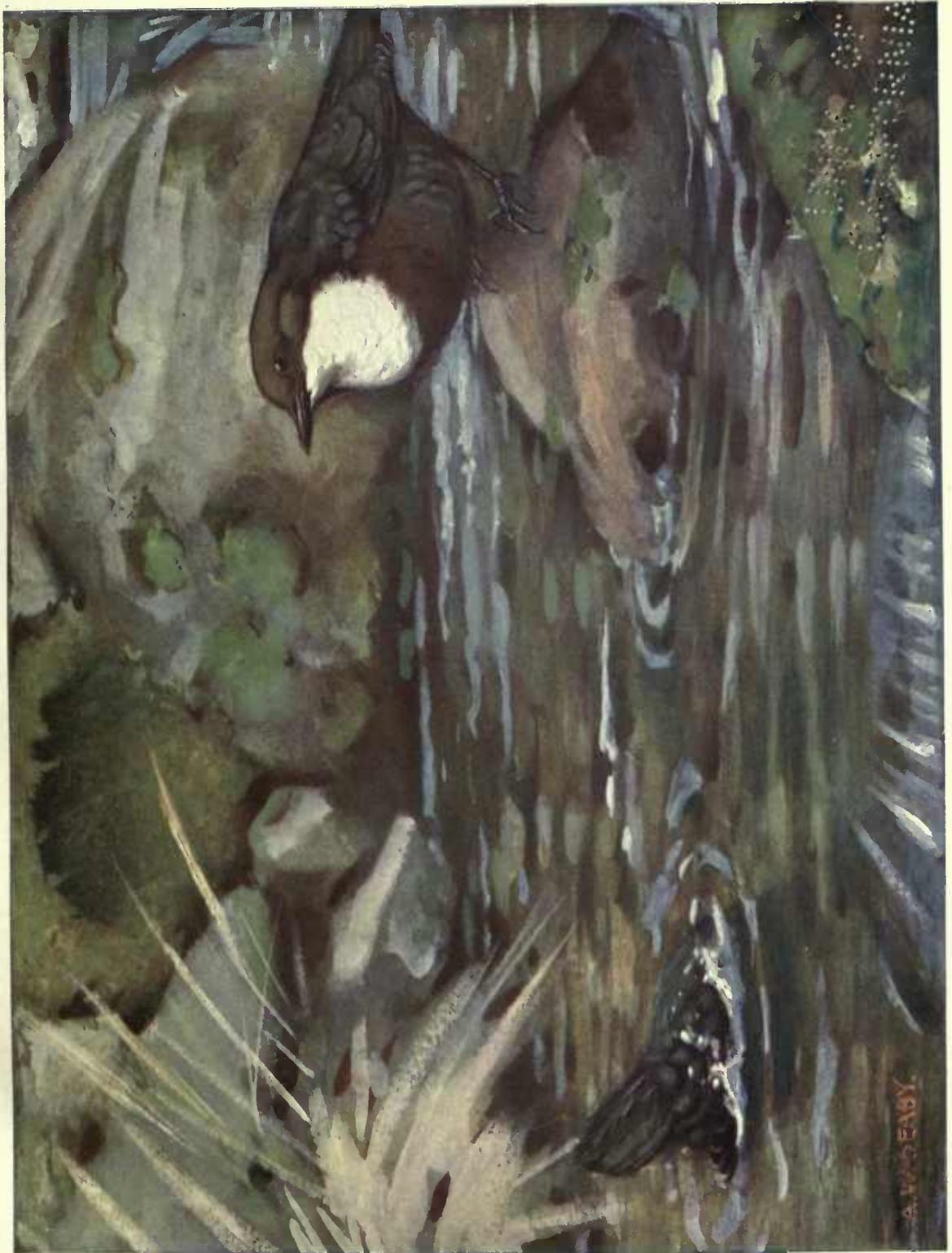
¹ Newton, *Dictionary of Birds*, p. 151.

² Cf. Macgillivray, *British Birds*, vol. ii.; J. A. Harvie-Brown and T. E. Buckley, *Fauna of Moray Basin*, vol. i.; D'Urban and Mathew, *Birds of Devon*, p. 31.

Plate 33

Dippers

By A. W. Seaby



was actually greater than that element.”¹ This may be explained by the not unlikely assumption that the bird keeps a firm grasp on the ground with its feet. The assumption does not, however, explain the statement, made by good authorities, that it will also sink in the same way, “horizontally” as Lord Lilford puts it,² from the surface of the water, unless, of course, the latter be shallow enough to permit the feet to touch bottom. This sinking from the surface I have not myself witnessed; the bird always seemed to me to dip under with a slight splash.

The excursions of the dipper beneath the surface of the water are of a strictly practical nature; it goes in pursuit of its prey, using its wings to propel it to the bottom, where it manages to maintain its position against the upward impulsion of its specific gravity by a combined effort of wings and feet. The strong claws of the latter serve to hold the bird fast to the bed of the stream at each step in its progress, the wings being perhaps chiefly employed in keeping the head downward so that the beak may do its work. The course of the bird is sometimes, if not always, marked by an upward stream of air-bubbles, some of which cling to its body, thus giving it the appearance of being decked with pearls.

The use of the claws here noted is precisely what one would expect from a Passerine species when picking up food at the bottom of the water. It would be difficult, for example, to imagine pochards or other diving ducks acting in the same way, the method of the latter being to keep themselves submerged, head downward, by upward strokes of the webbed feet.

The appearance of the dipper when thus “walking” in its aquatic pastures has been variously described. According to a correspondent in the *Field*, the method of progression resembles “a running flutter,” a phrase intended to emphasise the partial use of the wings as the bird runs along. Montagu, in an oft-quoted sentence, writes that to his

¹ Montagu, *Dictionary of British Birds*, p. 215.

² Lilford, *Birds of Northants*, i. 85, who endorses a similar statement made in Yarrell's *British Birds*, vol. i. p. 242.

eyes the dipper appeared "to tumble about in a very extraordinary manner with its head downward, as if pecking something." Most other observers lay stress on the difficulty it appears to experience in keeping at the bottom, but Macgillivray, who paid special attention to the species, in commenting on Montagu, remarks that "this tumbling is observed only when it is engaged in a strong current, and its appearance is greatly magnified by the unequal refraction caused by the varying inequalities of the surface of the water." A further commentary is supplied by the following note of an ornithologist, Mr. Thomas Garnett, writing as long ago as 1834: "It (the dipper) walked in, began to turn over the pebbles with its bill, rooting almost like a pig, and it seemed to have no difficulty whatever in keeping at the bottom, *at all depths*, when I could see it. . . . The awkward tumbling, shuffling wriggle is occasioned by the incessant motion of its head as it turns over the gravel." The italics are mine.¹

It is possible that the degree of effort exerted by the dipper may depend not only upon the strength of the current, but also upon whether the bird is working up or down stream, for there is evidence to show that it does both, though more usually the former.²

The dipper by no means limits its search for food—chiefly aquatic insects and small molluscs—to the bottom of streams. It may often be seen scrambling with somewhat awkward gait along the edge of the water under the bank, pecking here and there. It is perhaps this scrambling over the irregularities of the ground along the foot of the bank that misled Macgillivray into a disparagement of the walking and running powers of the bird. He writes of it progressing by "a kind of leaping motion," and affirms that its short legs and long curved claws are very ill adapted for running.³ But any one who watches one of these birds making its way over stones or the surface

¹ *Field*, 1889, vol. lxxiii. 801, 886; Montagu, *Dictionary of Birds*; Macgillivray, *History of Birds*, vol. ii.; Mr. Thomas Garnett in the *Magazine of Natural History*, 1834, quoted in Mitchell's *Birds of Lancashire*, edited by H. Saunders.

² *Field*, 1889, lxxiii. 801, 886. Macgillivray (*op. cit.*) observes that "it generally moves against the stream."

³ Macgillivray, *History of Birds*; and an article by the same in the *Naturalist*, 1837, p. 108.

of rocks will form quite a different opinion. It both walks and runs with ease. And the strength of its foothold, as Macgillivray did not fail to point out, is remarkable. One may frequently see it walking, or rather wading, up or down the steep face of a mossy rock over which the stream is swiftly flowing, pushing its beak for food into the moss beneath the current, regardless of the little white cascade that tosses and sparkles over its dusky head and back. It is this feeding habit of the dipper that helps to explain one of its structural peculiarities that is well worth notice. It is its use, not only to protect but to clean the eyeball, of the upper eyelid, instead of the transparent third eyelid, the so-called nictitating membrane. In the case of the dipper this membrane appears to have fallen into disuse, its function having been taken over by the upper eyelid. This, it seems to me, is partly, at least, due to the greater strength of the latter, further increased by a covering of tiny white feathers, which renders it conspicuous whenever the bird blinks, and it does so frequently.

The change may have been further assisted by the position of the eyelid, for when the bird happens to be feeding with its head under and opposed to a strong current, it would require not only a stout cover for its eyeball, but would find the upper lid the best adapted for the purpose, owing to the fact of its closing downwards, that is in the direction of the current, which would thus help by its downward pressure to keep the lid in place. The nictitating membrane, on the other hand, which does not move entirely horizontally across the eye, but, as stated by Newton, obliquely from "the outer lower toward the upper inner angle," and consequently in an upward and forward direction, would act in direct opposition to the current, which would, therefore, tend to push it open. There would be the same tendency in the case of the lower lid.¹

Some of the Continental representatives of the dipper have been

¹ Newton, *Dictionary of Birds*, p. 234. For the fact that the dipper uses the upper lid when blinking, I am indebted to Mr. Frank Finn's observations on a bird kept by him in captivity (*Country Life*, August 25, 1906). The feathering of the lid can be seen by examining any skin of the bird.

seen to adopt a less energetic method than those above described of seeking their food. Individuals have been observed either quietly swimming or simply floating lazily with wings outspread upon the water, pecking among the surface weeds.¹ This spreading of the wings as a means of support, which is frequently adopted by our dipper when not feeding, and possibly at times when feeding, is not peculiar to the species, though, as far as I am aware, no other species makes use of it except in accidental circumstances. I once saw a chaffinch fledgling, on first quitting the nest, flutter into a pond, which it did with a cheerful confidence born of the complete ignorance natural to its age. It did not, however, find the new experience an agreeable one. Keeping its wings spread open upon the water, it used them to move itself towards the bank, which it approached near enough to enable me to grasp its wet and bedraggled little person and put it to dry in the sun. It soon recovered sufficiently to insist vociferously upon the immediate attendance of its parents with restoratives. The behaviour of this young chaffinch in the water would probably be that of any non-aquatic flying bird, and is only what one would expect. The originality of the dipper consists in its having turned the accidental into the habitual.

The dipper occasionally indulges in a fish-diet. It has been seen to catch trout-fry, diving into the water after its victim, pursuing it, and finally dragging it from under some stone to take it out upon the rocks, bang it lustily on the same two or three times, then swallow it either whole, if small enough, or after tearing it in two. But it regards fish much as we regard lobster or *pâté de foie gras*—as a luxury to be indulged in rarely and with discretion. It is a luxury that it may very well be allowed, for any destruction it does among the fry is, according to the authorities, compensated for probably a hundredfold by its ravages among the insects injurious to the spawn. The wise preserver of salmon and trout will do well to regard the

¹ *Zoologisches Garten*, 1880, pp. 65-70 (K. Müller); J. B. Bailly, *Ornithologie de la Savoie*.

dipper as his friend, and to turn a deaf ear to the charges made against it, unless he is given proof positive and irrefutable that any individual bird is in the *habit* of feeding on *live* fry. And if a particular dipper is convicted, that does not justify an argument from the particular to the general, as an excuse for a general slaughter.¹

The account of the feeding habits of the dipper may conclude with an interesting observation by the late Mr. H. A. Macpherson, who saw one "hopping like a thrush over the grassy sods upon the bank, now upright, now wading into the shallows of some sippy ground, frequently inserting its bill into loosened soil." The bird was thus engaged because the river it frequented was flooded and running fast and high. Its proceeding may be regarded either as an intelligent adaptation to accidental conditions or a reversion to ancestral habits; probably to a combination of both. The most remarkable feature in it is the "hopping," upon which Mr. Macpherson, a very reliable observer, lays some stress. Why should the dipper hop like a thrush on grass, and run like a starling on the rocks? We shall find later other inconsistencies in its behaviour just as inexplicable.²

A dipper seldom quits the reach of stream it has chosen to regard as its own, and in flying up and down it prefers to follow all the bends, though it will not hesitate occasionally to cut a corner, if some unwelcome obstacle intervenes, such as a prying ornithologist. During the autumn and winter it is to be found singly and in pairs, the former being no doubt unmated birds. The statement often made that at these seasons the species is solitary may be explained by the fact that when a pair frequent the same stretch of water they are frequently apart. This is also the case even in the breeding season.³

¹ The account of the dipper's method of catching and eating fish is taken from the *Zoologisches Garten*, 1880, pp. 65-70 (K. Müller). How it manages to tear a fish in two is not explained. See on the general question of its food the "Preliminary Classified Notes" at the head of this chapter.

² H. A. Macpherson, *Fauna of Lakeland*, p. 103.

³ Mr. F. C. R. Jourdain has records of the dipper in pairs every month from December onward to the breeding-time, also for October and September. Mr. Charles Lee, of Letchworth, has a further record for October 29. In the *Zoologist*, 1844, p. 646, there is a record for January (J. J. Briggs). Macgillivray (*History of British Birds*, vol. ii.), who watched the bird closely, also states that it is "generally seen in pairs, sometimes singly." Mr. Jourdain has noted that

Only when a hard frost seals up the hill streams does the dipper move down towards the deeper waters of rivers, estuaries, and lochs, or to the seashore,¹ on which occasions it is compelled, however reluctantly, to subordinate its anti-social prejudices to the categorical imperative of its appetite. A few may then be seen together, each pair or individual no doubt eyeing its neighbours much in the way a gamekeeper might be expected to eye a poacher, when they happened to meet one another unprofessionally.

The dipper's distaste for society during the autumn and winter months appears to have its root in the feeling that a given stretch of watercourse will supply adequate means of living for one or two individuals of the species and no more. In possession of a good stretch of stream, he has little to fear from hunger. He has less to fear from cold. Unlike the rest of his Order, he has, in the course of generations, developed beneath his feathers a thick vest of down resembling that of typical aquatic birds. In midwinter, when the thrush, starling, and other Passerine species sit silent in lean despair, the dipper may be seen more rotund than ever, perched, it may be, on some floating block of ice, warbling to himself an inward meditative strain that has in it something of the free, carelèss music of the brook, tempered by a note of pious satisfaction that tells of a clear conscience resting securely upon the triple basis of a sound digestion, a healthy appetite, and a full larder.

If when spring comes round the dipper finds himself unmated, he must perforce set forth to seek a wife. If she is not to be found on the same stream, he must either remain unmated or, in knight-errant fashion, go win a dusky bride amid the tumbled rocks and rippling shallows of some distant stream. The necessity for these love-quests in cases where a stream is the haunt only of one or of an uneven number of dippers, explains perhaps some of the erratic excursions from its haunts that the

the dipper, when disturbed in autumn and winter, utters the clinking call-note, which would scarcely be the case if it were solitary.

¹ J. A. Harvie-Brown, *Fauna of Tay Basin*, p. 68.

species is known to make. Individuals have been seen flying high and straight overland, uttering at intervals the familiar clinking note. These movements, however, and also those which must take place at the end of the breeding season when the families disperse, have yet to be adequately studied.¹

It may fairly be taken for granted, as the result of the observation of birds in general, that, even though the male dipper has passed the winter with his wife, he will still find her coy and unwilling in the spring. She has been won, but she must still be wooed. It is her privilege, and secretly her delight, though to all outward seeming the adoration of the suitor leaves her visibly struggling to suppress the indifference barely concealed beneath an air of polite reserve.

The following account of a dipper's courtship, which Mr. J. R. Torr was fortunate enough to witness, derives an additional interest from the exciting adventure which befell the two lovers:—

“One day walking along the bank, I saw two patches of whitest snow bobbing up and down on a boulder. On nearer approach I perceived a pair of dippers performing their courtship. The male bobbed up and down, flaunting his white shirt front in the sun, fluttering his wings, and at intervals giving vent to a short but brilliant song, wren-like in character; while the female sat watching with her beady eyes, occasionally preening the dark plumage of her back and wings. At short intervals the cock darted onto the stream and disappeared for an instant, to emerge (shaking the drops from his feathers) and head for the bank, where he plumed himself and called softly to the hen. He would then proceed with his courtship, and all the time the little hen sat watching and scarcely moving. Suddenly a brown mass appeared above them; perfectly balanced on outstretched pinions, head and tail extended horizontally, a sparrow-hawk hovered over his intended prey.² Like a flash of lightning the

¹ For a note on the overland flights of the dipper I am indebted to my collaborator Mr. F. C. R. Jourdain. Among these movements must be counted those due to stress of weather.

² The description fits the kestrel better than the sparrow-hawk.

male dipper darted away straight for the shelter of an overhanging bank, but the female, instead of following his example, remained motionless, gazing, as if fascinated, at the bold dark enemy overhead. Suddenly the hawk swooped, with a single beat of its powerful wings, but just in time the dipper flung herself off the boulder. Uttering a short sharp cry, with head thrown back, she made for the open country. This gave her cruel pursuer the advantage, and it again prepared to swoop; the dipper saw the movement, and doubled with extraordinary swiftness. So interested was I in the contest, that I half raised myself from the tangle of brushwood among which I had hidden on first perceiving the birds, and saw the other dipper close beside me; he, entirely forgetting his own danger, was frantically calling to his companion in plaintive, long-drawn notes, and flying wildly from bush to bank and back again. The hen was evidently bewildered by the hawk's pursuit, for she never attempted to gain the shelter of a shrub, but kept scudding up and down over the surface of the water. But she was beginning to get tired, and no longer doubled with the same precision and swiftness, while the bird overhead floated to and fro, flapping its great wings quietly, almost lazily, watching its victim with wide-open eye, but not seeming to exert itself in the least. Seeing this, I thought it was time to interfere, and was about to do so, when a strange thing happened: quite suddenly, and without hesitation, the male dipper shot out from the bank straight under the hawk, which swerved aside as if to swoop, thus giving the female a chance of escape. Unfortunately, the keen-witted hawk had no intention of pursuing the second bird and allowing the first, who was already tired, to escape. Giving three or four quick beats of its broad wings, it dashed down towards the water with frightful swiftness, and, in spite of the agonised flutters of the kind little mate, would have caught its prey had not a missile intervened. Starting up from the ground, I seized a stick and threw it at the hawk, at the same time shouting and waving my arm. This had the desired effect; the hawk swept up, paused a moment in

mid-air, and then flew away. When I looked round the dippers had disappeared, and guessing that they would remain in hiding for some time, I left the glade.”¹

One would like to close the account of such an experience with the words: “they lived happily ever afterwards.” According, however, to Mr. Torr the domestic life of this pair of dippers was not without its crosses. They started well, both energetically setting about the construction of the nest, which was placed in a hollow of the bank beneath the shelter of a projecting rock. The cock did most of the carrying, the hen most of the building. But in the opinion of the cock and also of Mr. Torr, who was evidently prejudiced in favour of his own sex, the hen did not do her fair share of the work. She was “distinctly lazy; she often neglected the nest for an hour, and amused herself by dipping in the stream in search of grubs and water larvæ.” Mr. Torr adds that it “was very pretty to watch her dash into the water, scattering drops to right and left, leaving widening circles of ripple behind her, and reappear with the sunlight gleaming on her dark plumage, bringing out lights of glossy green and bronze amid the black.” But neither the graces nor the healthy appetite of the little lady availed to soften the hearts of the two stern unbending males who watched her. It did not even occur to them that she knew better than any one whether or not there was need of haste. Her husband, indeed, “the poor little cock,” after getting together a pile of material, would, on finding his wife still at her reprehensible feasting and flaunting, work himself into a state of high moral indignation, and proceed to chase her up and down and round about, until “persuaded” to continue her work. And it is evident that Mr. Torr would gladly have assisted her, had it been

¹ *Country Life*, August 4, 1906, p. 172. Mr. J. A. Harvie-Brown has given a good account of the dipper sex displays in the *Zoologist*, 1861, p. 7505. He saw one day a pair sitting on a stone and jerking up their tails. “The male bird would while sitting erect its head till its bill pointed straight upwards, and pour forth a small but pleasing song, and the female, uttering her usual note, would hop round and round her mate, every now and then flirting her tail and spreading out her wings, as if in the act of making a courtesy. The male bird while singing turned round as if on a pivot, so as always to face his partner. After thus amusing themselves and us, they would fly further down the stream and there recommence.”

in his power. The lady dipper, moreover, in this resembling her human sisters, showed a disposition not to share her mate's taste in furniture; she often refused "the rougher grasses and longer twigs"; she was, as viewed from the masculine standpoint of Mr. Torr, "fastidious and difficult to please." This was the opinion of her husband, and it made him very angry. There were quarrels and sometimes blows, the wife giving as good as she got; "they attacked each other, first standing plumage ruffled and heads lowered, and then hurling themselves one against the other, just like a pair of bantam cocks." The disputes were soon made up, and finally, at the end of ten days, the nest, a shaggy ball of moss, and grass, and leaves, was completed. The inside was neatly rounded and lined with finer materials, among which were "one or two hairs and a single large brown feather, probably belonging to a pheasant." The hen's method of rounding the interior was to sit in the nest, her wings slightly extended, and rotate slowly so as to bring pressure to bear on each side in turn.

The stages followed in the building of a nest when this is placed against a wall or rock are peculiar. The birds commence building from the bottom, and make, on the stone surface, a rough circular ring of moss, which easily catches the eye in the season. They lay moss alternately on one side and the other, and by the time the ring of moss is completed the base of the nest protrudes four or five inches, and the top about one inch from the surface, the thickness of the walls also tapering off from bottom to top. When the ring is completed, the dippers add material to the top until the whole of the nest is arched over.¹

This solid structure often has its broad base resting on a narrow, sometimes scarcely perceptible ledge. "Resting" is, in fact, not the word that describes its position, for the ledge is quite insufficient by itself to act as a support. The nest keeps its place only because it is

¹ This description is based on a note in the *Zoologist*, 1867, p. 755, verified by Mr. F. C. R. Jourdain (*in litt.*).

glued to the face of the rock, as one discovers when tearing it away. The cohesiveness is probably obtained by the application of the material in a wet state with admixture of mud, and it is not always strong enough to ensure the safety of the home, which after a time often falls away from the rock into the stream. In one case this occurred before the young were fledged.¹

There are normally two distinct parts in a dipper's nest, the outside oval case, chiefly of felted moss, and, inside it, a round open nest, built of various materials. The need for the outside case becomes clear when one sees some of the sites in which the nest may be placed. It has very frequently been found under a continuous drip of water, and many a time behind a waterfall, through which the birds have been seen to dash each time they went to feed their young. Possibly the thick mossy case is a comparatively late development that began when the species became definitely aquatic in its habits.

When the bird places its nest in a hole, it will dispense with the dome, and is probably, in most such cases, compelled to do so by lack of space. Such was the case with one that built in a sandmartin's hole two feet long.² In this the nest resembled a blackbird's.

The dipper does not always trouble to build a new nest each year. It may repair the old one and use it year after year, and often rears two broods from it each year. One has been known to be used for at least eleven years in succession.³ And one site has been known to be occupied by the nests of a pair and their heirs for 128 years (1785-1908).⁴

The dipper shares with the sandmartin and housemartin the distinction of being one of the three British breeding Passerine species that lay white eggs. This has been explained by the fact that the eggs of these species, like those of owls, woodpeckers, and others, are deposited in holes or domed nests, where the white

¹ F. C. R. Jourdain (*in litt.*).

³ J. Patterson, Yorks (*in litt.*).

² Nelson, *Birds of Yorkshire*, pp. 101-3.

⁴ H. Gladstone, *Birds of Dumfries*.

serves to make them more visible, in the darkness, to the bird as it enters, and so lessens the danger of their being trodden upon and broken.¹ It still remains to be shown, however, that species, *e.g.* the tits and daws, which, owing probably to some change in their nesting habits, lay coloured eggs in holes, suffer appreciably on that account. Is there, in the case of these species, a process of natural selection actually going on which tends to eliminate by breakage the more thickly spotted and darker eggs in favour of less spotted and paler? The question is one that careful records would answer.

After about two weeks from the date of laying, the eggs hatch out, and the shells are removed by the parents and dropped at a distance. From this moment both parents are assiduous in feeding the young, one, according to my observation, generally foraging up-stream, the other down. For many hours I watched a pair thus engaged near Inversnaid, by Loch Lomond. Each would return at intervals, alight on a boulder beneath the nest, curtsy with a droop of the wing and a downward flick of the tail, dart up to the nest, disappear into it, come out followed by fervent *pteeep! pteeeps!* from the throats of two lusty young, alight on the rock, curtsy, step daintily to the water, wash its beak, splashing it from side to side, and fly off with the familiar *chit! chit!*

That the dipper should so far have departed from Passerine customs as to wash its bill in the water instead of wiping it on a branch or rock is noteworthy. The fact that the young uttered their cry *after* and not before receiving the food is also curious, for while the food was being pushed down the deep yellow throat of one, the other had ample time to manifest its feelings. It may, of course, have been overcome by them!

The young in question showed the feathers just sprouting, and were therefore not big enough to thrust their heads out through the entrance, as they do later, and so watch for and greet the arrival of

¹ W. P. Pycraft, *A History of Birds*, p. 207.

their parents. The food brought by the latter was visible in the bill, but I was not able at the distance to recognise in what it consisted.

When the young are able to quit the nest, they sit on the stones and sun themselves, with a curtsy here and a curtsy there, keeping a sharp eye on the movements of their parents, who are warned from time to time by a shrill chorus of *pteeeps!* that a strict eye *is* being kept upon them, and that the promptest attention to their parental business will alone give satisfaction. And the fond parents certainly do their best.

Though young birds have not to be taught to fly, they have often to be persuaded to make the necessary effort. So it was with the young dippers observed by Mr. Torr. In order to get them to flit from rock to rock, the parents would display appetising worms in their bills and call on them to follow. One finally "made a desperate effort, and practically jumped to the next boulder," where he received his reward. His example was soon followed by the others. They were not able, however, to fly with ease till they had attained their full plumage.

It is interesting to note that these young dippers, unlike young ducks, showed no inclination to enter the water, in spite of the fact that their parents frequently set them an example. Their first experience of it was due to an accident. The whole family was seated on a fern-clad slab of rock, when, as the result of a difference of opinion, two of the young started fighting, the combat ending with the sudden disappearance of one of them over the edge of the rock into and under the water. The parents immediately dived after it, and all three reappeared, and fluttered on to the slab. That afternoon the others began voluntarily to dive freely, but their first efforts lacked discretion; "they came up spluttering and choking." They were soon, however, nearly as expert as their parents.¹

When disturbed from the nest, the unfledged young have been

¹ It has been noted that dippers in captivity lose all desire to enter the water. See Naumann, *Vögel Mitteleuropas*, ii. p. 211.

frequently observed to drop into the stream beneath and escape by diving, but there is no evidence to show that they sought this way deliberately. Indeed, the position of the nest would generally make it difficult for unfledged young to avoid the water, as they would naturally flutter downward. In one detailed account it is made clear that contact with the water was, in fact, the result of accident. In this case the parents had built in the wall of a tunnel. The latter, owing to drought, was nearly entirely dry, so that there was no water immediately beneath the nest. The young on being disturbed fluttered down the tunnel towards its mouth, where a considerable pool of water had survived. "They did not at all appear to seek it; on the contrary, their flight seemed to be as aimless as that of any other fledgling would have been in the same predicament. But one of them stumbled into the pool. The effect was most curious. When the young bird touched the water there was a moment of pause, as if the creature was surprised. Then instantly there seemed to wake within it the sense of its hereditary powers. Down it dived with all the facility of its parents, and . . . was immediately lost to sight among some weeds, and so long did it remain under water that I feared it must be drowned. But in due time it appeared all right, and, being recaptured, was replaced in the nest"¹

The evidence goes, therefore, to show that the young dipper has no inborn craving to take to the water, but that, when once introduced to it, the instinct to swim either on or under it may be at once awakened.

In this connection, it is interesting to note that the adult birds do not invariably dive in order to escape from their enemies, though this would seem the safest course for them to pursue. A study of the information available brings to light the following very curious fact,—that the dipper, when shot at, especially when wounded, or when startled from its nest or roosting hole, will often dive to escape,

¹ *Contemporary Review*, July 1875 (Duke of Argyll); quoted in Lloyd Morgan, *Habit and Instinct*, p. 65.

reappear and dive again, and perhaps end by taking wing; but when pursued by a bird of prey, it will, as already described in Mr. Torr's account, seek to escape by flight only, either going inland or scudding over the stream. I can only explain this strange behaviour by the assumption either that the bird is much more terrified by hawks than human beings, and so loses its wits, reverting to the instincts of its pre-aquatic days, or else that it dares not face the momentary pause necessitated by its habit of alighting on the water before diving instead of plunging straight in head-first.¹

The dispersal of the dipper family, whether of the first or subsequent broods, for as many as three may be reared, and sometimes from the same nest, is a subject about which there is little or no published information. Yet disperse they do, for, as already noted, the dipper tolerates no company but his own or his mate's during the winter months, unless compelled by frost to do so. As the smaller brooks would probably not accommodate more than two or three dippers at the most, if that, some members of the family would have to make overland excursions in search of new quarters in the neighbourhood, for there is no evidence that they migrate to lands beyond our shores. Dippers have been seen making overland flights in autumn, but to understand these movements it would be necessary to mark the young, and, if possible, the old, in various localities, and keep a sharp look out for them during the winter.

When once in the solitude of its winter quarters, the dipper, like the robin, beguiles the tedium of the intervals between its meals by song, which it utters either in flight or when perched upon a boulder. Like other species, it will utter incoherent no doubt, but yet unmistakable snatches of its song when fighting. This it has been

¹ Naumann, *Vögel Mitteleuropas*, ii. pp. 210, 212, states that the bird when startled from its nest or roosting hole will often dive under water, but that it seeks to escape the sparrowhawk by a zig-zag flight; Jaeckel, *Vögel Bayerns*, p. 13, instances the case of a dipper pursued inland and taken by a crow; *Country Life*, August 4, 1906 (pursued by kestrel—J. R. Torr); Macgillivray, *History of British Birds* (commonly dives when shot at and wounded, and will do so when persistently harried); and Mr. J. Patterson (*in litt.*), who informs me that he has seen it dive when shot at. But it does not always do so.

heard to do under very unusual circumstances. Two birds had been battering each other for some minutes with wings and beak upon the surface of a pool, when one seized its opponent by the crown of the head, which it then proceeded with great perseverance to duck repeatedly under the water. The bird thus treated sought to express its feelings—whatever they were, defiance or terror or despair—by bursting into song whenever its head reappeared above the surface. The end of the combat was not witnessed, as the onlookers' dogs, with the usual meddling imbecility of their kind, intervened and scared both dippers away, and so our tale must be left unfinished.¹

¹ *Field*, vol. lxi. p. 65 (James Carter).

THE THRUSH FAMILY

[ORDER : *Passeriformes*. FAMILY : *Turdidæ*. SUBFAMILY : *Turdinæ*]

PRELIMINARY CLASSIFIED NOTES

[F. C. R. JOURDAIN. F. B. KIRKMAN. W. P. PYCRAFT. A. L. THOMSON]

MISTLE-THRUSH [*Turdus viscivorus*, Linnæus. Missel-thrush, storm-cock, thrice-cock, holm-thrush, holm-screech, screamer. French, *draine* ; German, *Mistel-drossel* ; Italian, *tordela*].

1. Description.—The adult may be distinguished at once by its large size and the large, transversely oval spots of black which cover the whole of the breast and flanks, no other adult British thrush having spotted flanks, while a varying number of the tail feathers, save only the middle pair, have a white spot at the tip of the inner web, often conspicuous during flight. (Pl. 34.) Length 10·5 in. [267 mm.]. The upper surface is of a greyish or ash-brown colour passing into ochreous yellow on the rump : while the ground colour of the under surface is of a golden buff, fading, on the lower part of the abdomen, into white. The superciliary streak is white, and extends forwards to the lores : the under tail-coverts and the median wing-coverts are tipped with white. On the throat and neck the spots are fan-shaped. The sides of the head are mottled with black. The sexes are alike. The fledgling differs from the adult in that the spots on the breast are relatively smaller and rounder, while the upper surface is mottled and streaked with buff and black on a ground of ochreous brown. Its crown feathers are of a greyish brown colour, and each bears a large central spot of buff : on the mid-crown feathers this spot is bounded distally by a V-shaped border of black. The interscapulars are of an ochreous brown, broadly tipped black, and with the median portion of the feather buff : the scapulars differ in having the buff area linguiform and narrowly margined with black. As this area extends almost the whole length of the feather, the black portion of the distal end of the buff area forms also the tip

of the feather. The buff and black spots on this region of the body are conspicuous. Lesser and median coverts dark brown, with broad shaft-streaks of buff. Major coverts and inner secondaries with broad margins of buff-yellow. Rump pale ochreous brown, with broad shaft-streaks of buff, and black tips. Upper tail-coverts dusky brown, with central area of buff, and margined with buff. Inner primaries with a narrow free edge of dull white. The fledgling mistle-thrush is distinguished from the young song-thrush by the much paler ground colour, the very broad streaks of buff on the head, back, and wings, the pattern on the rump and tail-coverts, and the sharply defined black spots on the back. Soon after departure from the nest, the buff-coloured areas bleach. [W. P. P.]

2. Distribution.—The British Isles, the Continent of Europe,—except in the extreme north of Scandinavia and Russia—and the Mediterranean Isles. In North-west Africa and the temperate parts of Asia other local forms are found. In the southern part of its range it is exclusively a bird of the mountains. In the British Isles it has increased its range of late years, though scarce in the north of Scotland, and has bred in the Orkneys occasionally, as well as in Skye and others of the Hebrides. In Ireland it is also increasing its range. [F. C. R. J.]

3. Migration.—This species is resident throughout the year within our area, and a large proportion of the birds are, in all probability, stationary. Other individuals are more or less migratory. In many parts local movements are the only ones to be observed; noticeable changes in level, for instance, take place in Wales and elsewhere (cf. Forrest, *Fauna N. Wales*, 1907, p. 68). In Great Britain there is a considerable immigration from Northern Europe in late autumn, and a return journey in spring. A slight emigration from the south coast also takes place in autumn, with a corresponding spring immigration, birds of this species being recorded at the lighthouses of the western half of that coast in November and March. Many individuals take part in both sets of movements, and are, therefore, probably birds of passage from North Europe on their way to winter quarters south of the English Channel. Migration towards the milder parts of our islands, and also across the Channel, is resumed on the approach of severe winter weather (cf. Nelson, *B. of Yorks.*, 1907, p. 1; Ticehurst, *B. of Kent*, 1909, pp. 1, 2; and *B. O. C. Migration Reports*, iii. pp. 180 and 187). In Ireland mere local movements are the rule, but there is a general tendency towards the south-west on the approach of winter, and a slight immigration from Great Britain at the same season. Corresponding return movements take place in spring (cf. Ussher and Warren, *B. of Ireland*, 1900, p. 1). A gregarious migrant. [A. L. T.]

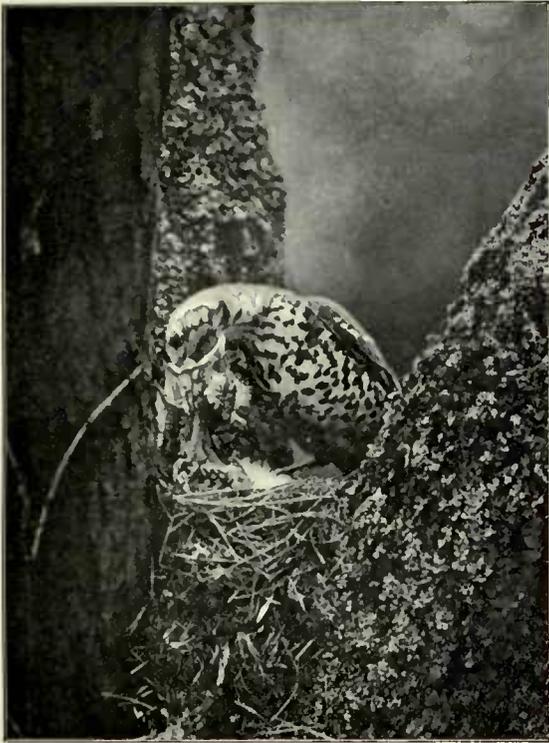


Photo by F. Warren

Mistle-thrush feeding its nestlings

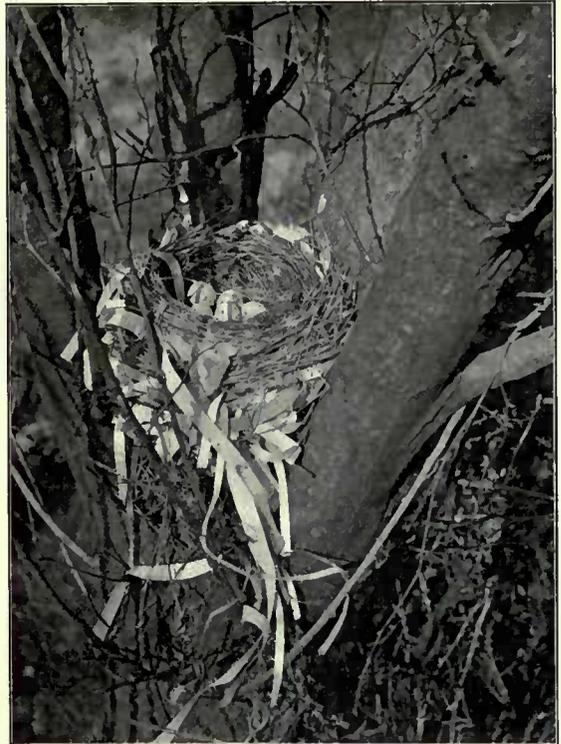


Photo by F. E. Daniel

Mistle-thrush's Nest partly made of strips of wall-paper

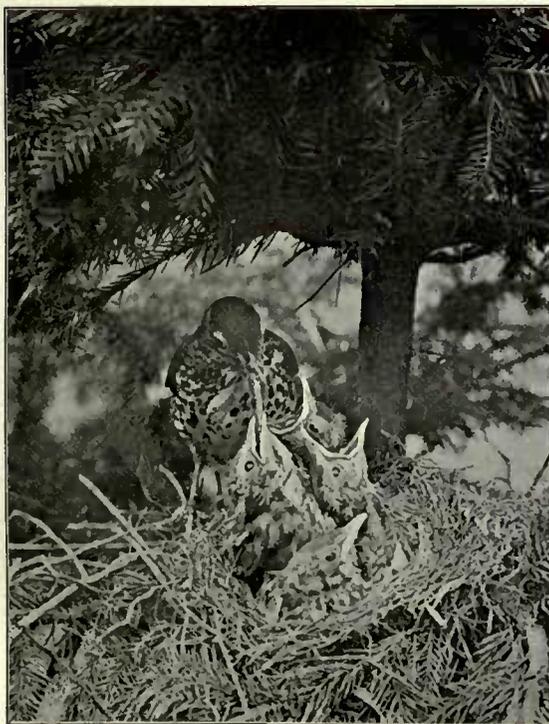


Photo by W. Farren

Song-thrush pulling back a worm from the throat of a nestling

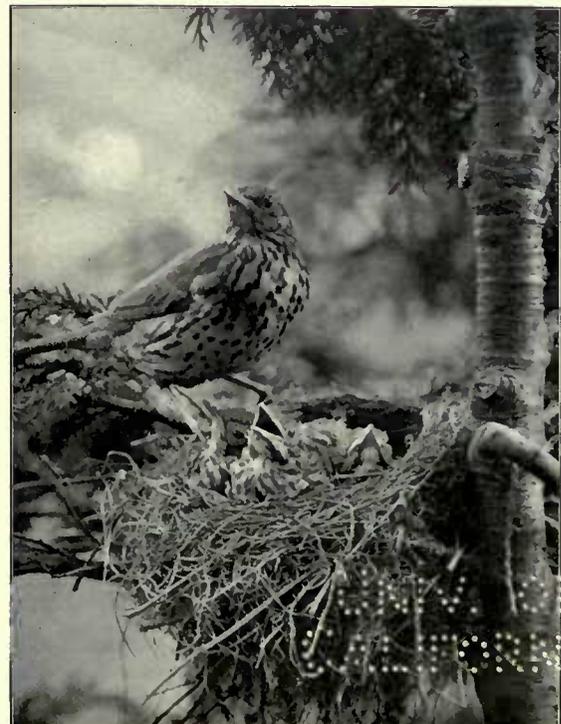


Photo by A. Taylor

Song-thrush and nearly fledged young

70 1000
ABSTRACT

4. **Nest and Eggs.**—The nest is generally in the fork of a forest tree at a fair height, but sometimes quite low down. In treeless districts and on the coast it is not infrequently found on ledges of cliffs or in stone walls, rarely on the ground (*Zool.*, 1903, pp. 226, 312). It is built of grasses, bents, wool, lichens, and other materials, solidified with mud and lined with dry grasses. (Pl. XIII.) The male is said to share in its construction (Fatio, *Faune de la Suisse*, ii.; Bailly, *Ornith. de la Savoie*, ii. p. 191). Eggs generally 4, rarely 5 in number. W. Farren has found 6. (Cf. *Zool.*, 1910, p. 226.) They are blotched and spotted with reddish brown and violet on a tawny or greenish white ground. Sometimes the ground colour is a distinct blue. (Pl. C.) Average size of 100 eggs, 1·16 × ·87 in. [29·56 × 22·27 mm.]. Laying begins sometimes in February, but generally towards the end of March or early in April. Incubation is performed by both sexes, and lasts 15 days. Two broods are usually reared, sometimes from the same nest. [F. C. R. J.]

5. **Food.**—Worms, insects, snails, berries, fruit, and occasionally seeds, and in hard weather on the coast shell-fish (see p. 354). The young are fed by both parents, chiefly on worms and insects, sometimes on berries. W. Farren has seen them fed with ivy berries and cherries. [F. B. K.]

6. **Song Period.**—It is generally heard from September to June, and is at its best from about the end of December to when the young are hatched, usually in April. [F. B. K.]

SONG-THRUSH [*Turdus musicus clarkei*, Hartert.¹ Mavis, throstle, snail-jobber, grey-bird. French, *grive*; German, *Sing-drossel*; Italian, *tordo bottacio*].

1. **Description.**—Distinguished at once by the uniform warm olive-brown of the upper parts, and the fan-shaped black spots of the under parts giving place to striations on the flanks. The ground colour of the fore-breast (prepectus) and the sides of the neck is of a rich golden buff, the throat, lower part of the breast, and abdomen are white. (Pl. 35.) The lores and superciliary streak are buff-coloured, the sides of the head and auriculars are mottled with black, while the throat is bounded on either side by a band of black striations on a buff ground. The median wing-coverts are tipped with buff, and similar, but less distinct,

¹ If the tenth, and not the twelfth edition of Linnæus is followed, the name *Turdus musicus* should be applied to the redwing. In this case the name of the song-thrush would be *Turdus philomelos* of Brehm (1831) as it comes next in order of priority; but to discard *T. musicus* now would only cause confusion, and so defeat the main aim of nomenclature and classification.—ED.

markings terminate the major coverts, forming two more or less distinct wing-bars. The axillaries are golden buff, not white, as in the mistle-thrush. Length 9 in. [229 mm.]. The sexes are alike. Length of female, 8·5 in. [216 mm.]. Juvenile plumage: the fledgling has the upper part browner than in the young mistle-thrush, the general hue being of a dark wood brown, sometimes inclining to rufous on the head. The broad buff streaks which mark the upper parts of the mistle-thrush are here reduced to fine lines of buff, wider on the feathers of the scapulars and interscapulars. The black transverse bars on the mantle are inconspicuous. The lesser coverts have narrow shaft-streaks of yellow: on the median coverts these streaks are wider, expanding towards the tip of the feather. The major coverts are broadly tipped with yellow, thus forming a bar across the wing, and the innermost secondaries may have dull yellow tips. The primaries lack the dull margins of the young mistle-thrush. The rump is somewhat darker and browner than the back, and the feathers may have a dull black terminal bar, giving an indistinctly spotted appearance to this region. The spots on the breast resemble those of the adult, but the flanks are spotted, not striated as in the adult. [W. P. P.]

2. Distribution.—The species is distributed over the British Isles and the greater part of the European Continent, from about 60° N., to the Pyrenees, North Italy, the Balkans and the Caucasus, as well as Siberia east to Lake Baikal. British breeding birds belong to a local form, *T. musicus clarkei* (Hart.). It is (as far as known) confined to the British Isles, where it is common everywhere, and breeds even in the Outer Hebrides and Orkneys, but rarely in the Shetlands. [F. C. R. J.]

3. Migration.—To the Shetland Isles the song-thrush is chiefly a rare casual visitor, but over the rest of our area the species is found in suitable localities throughout the year. Some of the individual birds are no doubt stationary, others, on the approach of winter, exchange higher for lower levels, or inland for seaside feeding-grounds (cf. Forrest, *Fauna N. Wales*, 1907, p. 70; and Ussher and Warren, *B. of Ireland*, 1900, p. 2). Many are migrants, some being summer visitors, and others, to which the Continental race (*T. musicus musicus*) may be referred, are winter visitors or birds of passage. The movements are very complex, and we base our brief statement chiefly on Mr. W. Eagle Clarke's summary (*Report Brit. Assoc.*, 1900, pp. 404-409):—(a) A southerly movement within our area and exodus from it of a proportion of our summer thrushes takes place "at the end of summer and during the autumn." Later on, further emigratory movements in the same direction,

“due to climatic pressure, set in with the first severe weather, and recur with each outburst, but in gradually diminishing volume.” The corresponding return spring immigration “from Southern Europe, commences in February and continues until the middle of March.” (b) It is noteworthy “that the thrush does not participate in the east to west autumn, and west to east spring, movements across the southern waters of the North Sea to and from Central Europe.” But with Northern Europe there is a regular intermigration: “the first immigrant thrushes—winter visitors and birds of passage—appear on our shores from the N.E. during the latter days of September.” The great influx takes place during October, marked “rushes” being frequently noted about the middle and end of the month respectively. Immigration practically ceases with the close of October, considerably earlier than is the case with the song-thrush’s more strictly northern congeners. The immigration takes place on the east of Great Britain from Orkney to Norfolk, but the birds spread westwards, and many cross to Ireland. The cold weather movements within our area, later in the season, take a similar course, the mild south-west of Ireland harbouring great numbers of the birds. The return departures for Northern Europe “set in and are continued throughout April, and sometimes into May.” (c) Our various coasts are also visited by thrushes which are on passage from Northern to Southern Europe. The seasons of these purely passage movements correspond with those of the other migrations already described. A certain further number of individuals are birds of passage in the sense that they remain with us only to participate later in the cold weather emigrations already alluded to. These winter movements, however, are more to milder parts of our area than completely beyond its limits. The song-thrush is chiefly a nocturnal migrant, and is frequently killed at the lighthouse lanterns, but it also travels by day. It is a gregarious migrant, and also often accompanies its congeners and other species. (For fuller details of these complex movements, cf. Clarke, *loc. cit.*; Ussher and Warren, *loc. cit.*; Ticehurst, *B. of Kent*, 1909, p. 4; and *B. O. C. Migration Reports*, iii. p. 187, and iv. p. 179.) [A. L. T.]

4. **Nest and Eggs.**—Nesting place: often in evergreens in gardens, hedges, rows or bushes, in sheds, sometimes on the ground, or on bank-sides, and in ivy. The nest is built usually of dry grass, moss, a few twigs, leaves, and, more rarely, gorse, bracken, wool, etc., lined with a fairly smooth plaster composed of one or more of the following materials—decayed wood, decayed vegetable matter, mud, dung, with the occasional addition of chips of straw or of grass stalks (see p. 377). (Pls. XIII.-XIV.) It is constructed by the hen, but the cock has been seen to help.

Eggs 4 or 5, rarely 6, clear blue in ground colour, and generally marked with some fine or bold spots of almost black. Varieties are boldly blotched with deep red-brown, or have streaks, and in some cases ashy shell markings, while some eggs are entirely without markings. (Pl. C.) Average size of 50 British eggs, 1.11 × .82 in. [28.4 × 20.9 mm.]. Laying sometimes begins in February, but generally in the latter part of March. Incubation is chiefly performed by the hen, and lasts till the 14th or 15th day. Two or three broods are reared during the season. The young remain a fortnight in the nest. [F. C. R. J.]

5. Food.—Worms, insects, snails, grey slugs (*Agriolimax agrestis*), berries, fruit, “but to a much less extent than the blackbird” (Newstead), and in hard weather shell-fish. The young are fed by both parents, chiefly on worms and insects, also snails, slugs, and their eggs. [F. B. K.]

6. Song Period.—From September or later to July. The 22nd of the latter month is the latest date in my notes. The date of beginning in autumn appears to vary considerably. In addition to the pause during the moult (July-August), there is a pause or slackening in November, which is, however, not apparent “in very favourable localities” (C. and H. Alexander, *British Birds*, i. 369). [F. B. K.]

CONTINENTAL SONG-THRUSH [*Turdus musicus musicus*, Linnæus.]

1. Description.—Differs from the British breeding race chiefly in the more olive and less rufous colour of the upper surface, especially the rump. (Hartert; *Vögel der Paläarktischen Fauna*, i. p. 651.) [F. B. K.]

2. Distribution and Migration.—This form is found during the breeding season in Western Asia, and throughout Europe, except in the extreme north, Spain, Southern Italy, and Greece. It is a winter migrant in Great Britain, Southern Europe, North Africa, the Canaries, and in Persia. [F. C. R. J.]

REDWING [*Turdus iliacus*, Linnæus.¹ French: *grive-mauvis*; German, *Weindrossel*; Italian, *tordo sassello*].

1. Description.—Distinguished from the mistle- and song-thrush by the rust-red colour of the flanks, and in having the breast indistinctly striated, instead of spotted, with black: the flanks are striated. (Pl. 38.) Length 8.5 in. [216 mm.]. The upper parts are olive-brown, relieved by a broad white superciliary streak

¹ Strictly *Turdus musicus*, but this name has generally been applied to the song-thrush.

running forwards over the lores, which are black; the ear coverts are dark brown; from the gape backwards to the sides of the neck runs a band of buff colour—in some individuals nearly white—terminating in a patch of deep buff, occasionally even rust-red, behind the ear coverts. The throat is white, more or less striated with black, and bounded on each side by a broad band of blackish brown, running below the white or buff area just described. The pectoral region has a tinge of buff, the rest of the under parts are white, with the exception of the rust-coloured flanks and axillaries. The major coverts are tipped with white, and so also very frequently are the innermost secondaries. The striations on the breast also vary very much, being very blurred in some, sharply defined in other individuals. This may prove to be a sexual character. The secondaries and tail feathers are of a darker hue than the back, and the secondaries have pale margins. Juvenile plumage: distinguished at once by the rust-coloured patch on the flanks, the buff superciliary stripe surmounted by an acute bar of black, and the black spots and buff shaft-streaks of the back. The general hue of the upper parts is a dark brown, relieved on the head by a broad buff superciliary stripe, and a shorter, more arched band of black enclosing a space immediately above. This band apparently answers to the inner supra-ocular band of down-tufts in the early nestling stage. The scapular and interscapular feathers have a broad bar of black across the tip, and narrow shaft-streaks of buff. The interscapular region has the appearance of being streaked with buff and spotted with black. The buff shaft-streaks of the median coverts are wedge-shaped; the three innermost major coverts are similarly marked. The fore-part of the breast is buff-yellow relieved by round and oval black spots, the former in the breast, the latter in the fore-breast. Flanks, anteriorly, of a buff-yellow, passing backwards into rust colour, and thence, posteriorly, into dull white, the whole area being spotted more or less conspicuously with black. In the spots on the flanks and breast the young differ conspicuously from the adult. The black bar above the eye, and the buff shaft-streaks are similarly wanting in the adult. [W. P. P.]

2. Distribution.—In the breeding season this species inhabits Iceland, the Færoes, Northern Scandinavia, and North Russia south to East Prussia and North Poland; also Siberia as far as the river Lena. [F. C. R. J.]

3. Migration.—Apart from occasional possible exceptions, the redwing is a winter visitor and a bird of passage to the British Isles. The autumn immigration from Northern Europe is chiefly on our eastern seaboard from a north-easterly direction, but there seems to be a westerly migration also, to the south-east of

England from the neighbouring shores of the Continent (cf. Nelson, *B. of Yorks.*, 1907, pp. 6-8; and Ticehurst, *B. of Kent*, 1909, pp. 6, 7). The first arrivals are late in September or early in October, but Ireland and even some western districts of Great Britain are not reached to any extent till the latter part of October (cf. Forrest, *Fauna N. Wales*, 1907, p. 71; and Ussher and Warren, *B. of Ireland*, 1900, p. 3; and *B. O. C. Migration Reports*, iii. p. 188, and iv. pp. 180, 181). The first appearance of the redwing is followed by an exodus from our south coasts of those individuals which are birds of passage on their way to the other side of the Channel. Both immigration and emigration are at their height in November, and the latter especially is renewed later in the winter on every approach of very severe weather. The corresponding return migrations set in in February, are at their height in March, and dwindle in April. A few redwings usually remain in parts of Great Britain till early May (cf. Ticehurst, *loc. cit.*: and *B. O. C. Migration Reports*, i. p. 124; ii. p. 177; iii. p. 179; and iv. p. 171). The species migrates in parties or in flocks of moderate size. It is chiefly a nocturnal traveller, and is often to be heard calling at night. [A. L. T.]

4. **Nest and Eggs.**—Does not breed in the British Isles. [F. C. R. J.]

5. **Food.**—Worms, insects, snails, berries. “On their arrival they will sometimes resort for a few days to the fields of turnips for cole seed” (J. Cordeaux, *Birds of the Humber District*). [F. B. K.]

6. **Song Period.**—In this country one may hear flocks warbling in chorus, and individuals practising their spring song early in the year, but the latter in its finished form is heard only in the birds’ summer haunts. [F. B. K.]

FIELDFARE [*Turdus pilaris*, Linnæus. Blue felt, felfer, blue-rump, chucker. French, *grive-litorne*; German, *Wacholderdrossel*; Italian, *tordela gazzina*].

1. **Description.**—Distinguished at once by its large size—length 10 in. [254 mm.]—and the rich chestnut-brown of the back standing in sharp contrast with the light slate-grey head, hind-neck, and rump; while the breast is of a rich buff colour striated with black, and the flank feathers have black shield-shaped markings and broad fringes of white, which, in newly moulted specimens, more or less obscure the black pattern. The contrast of the grey rump with the dark tail helps to distinguish the species when in flight. (Pl. 36.) The grey of the crown is relieved by lanceolate shaft-streaks of black, conspicuous only during the spring and summer, when the feather-fringes of the autumn have become abraded. The grey of the rump is of a uniform hue. The interscapulars and scapulars are of

a rich chestnut, paler in some individuals, each feather having a marginal fringe of grey. The lores are black, and there is a faint white superciliary streak. The face is nearly black. The throat and fore-breast are of a rich deep buff, relieved by moderately broad shaft-streaks of black. In the prepectoral region it should be noted the shaft-streaks are replaced by a horse-shoe of black. Traced breastwards, the horse-shoe gives place to a -shaped pattern; in the living bird all but the stem being concealed by the over-lapping of the feathers. On the fore-part of the breast the black area is reduced to a small, more or less arrow-shaped spot, or to fan-shaped spots. The flank feathers immediately covering the wrist-joint are black, with an inner margin of buff along the fore-edge of the feathers. Farther back these flank feathers bear a large central shield-shaped area of black surrounded by a broad fringe of buff, becoming white on the hind-flanks, where the black area is conical in shape. The lower breast and abdomen are pure white. The outermost tail feather may bear a thin line of white along the tip of the inner vane, and this is still more marked in the juvenile plumage, where it extends upwards along the fore edge of the inner web. Just before the autumn moult all the feathers are greatly abraded, the pale fringes to the feathers being completely lost, and the dark area greatly reduced. The black markings on the crown and breast are then conspicuous, while the buff hue has completely disappeared. The female is slightly duller than the male, but is barely distinguishable. Juvenile plumage: the fledgling resembles the adult, since the scapular and interscapular region are of a warm brown, inclining to chestnut, and contrast with the head and rump, which are of a greyish brown. Median stripes of buff (shaft-streaks) occur in the scapulars and interscapulars, which are faintly tipped black: on the scapulars the buff areas have a narrow border of black. The lesser wing-coverts are dark brown, with very narrow buff shaft-streaks, terminating in a black and white spot—the white at the tip of the feather, a pattern producing a brush-like appearance, the rest of the feather being invisible in a general survey. The major coverts are tipped with white, and on the innermost feathers the white runs up to form a shaft-streak. Throat pale buff colour, breast a rich buff-yellow, each feather with a large slightly oval spot of black at its tip. Flanks like the breast as to ground colour, but this fades into white over the region of the thigh, and is relieved by slate-coloured transversely oval spots: on the fore-part of the flanks the spots are very distinct, thus contrasting strongly with the same region in the adult. At a somewhat later stage of the juvenile plumage, the head, neck, and rump are greyer, and the shaft-streaks of the rump and scapulars more apparent. By the chestnut saddle and grey head

and rump the young fieldfare may readily be distinguished from the young of any other thrush. [W. P. P.]

2. Distribution.—In Europe it breeds in Scandinavia, Russia south to Poland, in Germany commonly in E. Prussia and in Silesia, Bavaria, etc., Bohemia, Galicia, and in small numbers in Hungary. Also in Asia east to the river Lena. [F. C. R. J.]

3. Migration.—Apart from purely exceptional occurrences, the fieldfare is only a winter visitor and a bird of passage in the British area. Its autumn arrival and spring departure are both rather later, on an average, than those of the red-wing. A few fieldfares may be recorded soon after mid-September, usually near their points of arrival on our shores. No very marked immigration occurs till the middle of October, however. From then till mid-November a steady influx takes place, usually punctuated by one or more great "rushes." The arrival takes place on the east of Great Britain from Shetland to Norfolk. From the south-westerly line of flight of these individuals, and from the distribution of the species, it is evident that Scandinavia, and especially Norway, is the home of most of our fieldfares. The majority of the earlier flocks are composed entirely of young birds. The immigrants quickly spread overland throughout our area, and some, the birds of passage, at once pass beyond it across the Channel. Other birds of passage perhaps never do more than "coast" along our eastern seaboard before flying farther south. A certain further number arrive on our northernmost shores to pass down the west coast of Scotland. By this route probably come most of the fieldfares that are winter visitors to Ireland, as well as those which are birds of passage along both shores of the Irish Sea. The latter quit our shores for the most part between the Scilly Isles and the Eddystone. No immigration of any importance occurs after mid-November, but severe winter weather later on causes a fresh influx to the low-lying coast districts. This is not from overseas, as might be supposed by the coast observer, but from the higher grounds inland, which the fieldfares resort to soon after their arrival. Continued hard weather drives the birds farther south, even to beyond the confines of our area. The return immigration and passage begin towards the end of March, and sometimes last into early May. The first birds of passage to arrive must linger for a short time in our islands, for the north-easterly emigration and continued passage do not set in till early in April: they regularly last into the first week of May. Similar return movements occur along the less important western routes. The fieldfare is a markedly gregarious migrant: "flocking" is usually noticeable before the spring departures,

and huge flocks may sometimes be seen actually on their way. The species may be seen in company with other species, allied and otherwise. Although mainly a nocturnal migrant, it is less often taken at the lighthouses than are its congeners. (For fuller details see W. Eagle Clarke, *Report Brit. Assoc.*, 1902, pp. 274-277: cf. also Ussher and Warren, *B. of Ireland*, 1900, p. 5: and *B. O. C. Migration Reports*, i. p. 124; ii. p. 177; iii. pp. 179 and 188-189; and iv. pp. 171, and 181-182.)
[A. L. T.]

4. **Nest and Eggs.**—The species does not breed in the British Isles.
[F. C. R. J.]

5. **Food.**—Worms, insects, snails, berries, and in hard weather shell-fish and turnips. [F. B. K.]

6. **Song Period.**—The song is not heard in this country. Flocks may be heard chattering together in the trees, especially before the spring emigration.
[F. B. K.]

BLACKBIRD [*Turdus merula*, Linnæus. Ouzel, blackie. French, *merle*; German, *Amsel*; Italian, *merlo*].

1. **Description.**—The male is distinguished at once by its glossy black plumage, orange-yellow beak, yellow rim round the eyelid, and black legs. (Pl. 35, 39.) Length 10.5 in. [261 mm.]. The female is dark umber-brown above. The throat is white relieved by dark striations; the fore-breast (prepectus) is rufous, and mottled with small, faint, fan-shaped spots; the flanks and breast are dark grey, deepening to the under tail-coverts, which are darkest. But considerable variation in the hues of the under parts obtain, some birds being much greyer than others. Juvenile plumage: the upper parts are of a deep chocolate-brown; the feathers of the crown and mantle are marked by pale rufous shaft-streaks, broadest on the back, and lesser wing-coverts. The greater coverts may have rufescent tips, and shaft-streaks of the same hue in the case of the inner coverts. The wing-quills are of a uniform brownish black. The under parts are of a tawny yellow, darkest in the prepectoral region. A lateral stripe of black runs from the mandible backwards on each side of the throat, which is of a buffish white. The prepectus and flanks are barred with black, the barring being heaviest in the prepectoral region, where a few spots may occur. Under tail-coverts heavily barred with black; abdomen dull grey, or tinged with rufous. In the amount of the barring, and the hue of the under parts, considerable variation is found. The male, in this plumage, is said to

have a rather stouter bill, and to be darker in hue, especially in the region of the wrist. [W. P. P.]

2. **Distribution.**—The British Isles, Scandinavia and Central Europe, but absent from the high north, and replaced in Spain, the Balkan Peninsula, Madeira and the West Canaries, the Azores, South Morocco, North Morocco, and Algeria as well as Syria, by local races. In the British Isles it is generally distributed and plentiful, except in a few of the Outer Hebrides and the Shetlands, where it is absent, and rare in the Orkneys. [F. C. R. J.]

3. **Migration.**—Resident as a species throughout our area, but rather commoner in winter than in summer, except in the most northerly districts. Many individuals are probably stationary, or subject only to mere local movements. Others are winter visitors or summer visitors, or perform shorter migrations within our area. Autumn immigration with thrushes, felts and redwings from N. Europe occurs on the east coast of Great Britain, and especially on the south-east of England. A migration from Great Britain to the east coast of Ireland also takes place at the same season. Autumn emigration southwards from our area is less important, and is chiefly by way of the south-west of England. A certain amount of late southward movement within our area, and even of emigration, may be noted in winter when very severe weather sets in. In spring the various movements are reversed. Mid-September till late November, and early March to mid-April, are the chief migration periods. The autumn immigrants to our east coast are young males to a very great extent. The species is chiefly a gregarious and nocturnal traveller (*Brit. Assoc. Rep.* 1900, 404-9; cf. *B. O. C. Migration Reports*, iii. pp. 180 and 189; iv. pp. 172 and 182-183; Nelson, *B. of Yorks.*, 1907, pp. 14-15; and Ussher and Warren, *B. of Ireland*, 1900, p. 6). [A. L. T.]

4. **Nest and Eggs.**—Nesting place: much the same situations as those of the song-thrush, often in evergreens, hedges, or thick bushes: sometimes in ivy or on banks, occasionally at a considerable height in trees, in buildings, or on the ground. It is built of moss, stalks, grasses, and sometimes a few twigs, solidified with mud and lined with the same material, but upon this is placed an inner lining of dry grass. (Pl. XIV.) Its construction is undertaken by the hen, but the cock has been seen to assist (p. 371). Eggs 4 or 5, rarely 6, generally bluish green in ground colour, sometimes evenly freckled all over with fine brown spots, and at other times more or less boldly spotted or blotched with red-brown and grey shell-markings. Sometimes these markings form a dense cap, and almost black streaks or spots occur singly, while in other cases the ground colour ranges to clear blue, and



Photo by F. B. Kirkman

Song-thrush's Nest on the ground. Uncommon sits



Photo by F. B. Kirkman

Blackbird's Nest with young



Photo by F. B. Kirkman

Blackbird's Nest on the ground in a bank

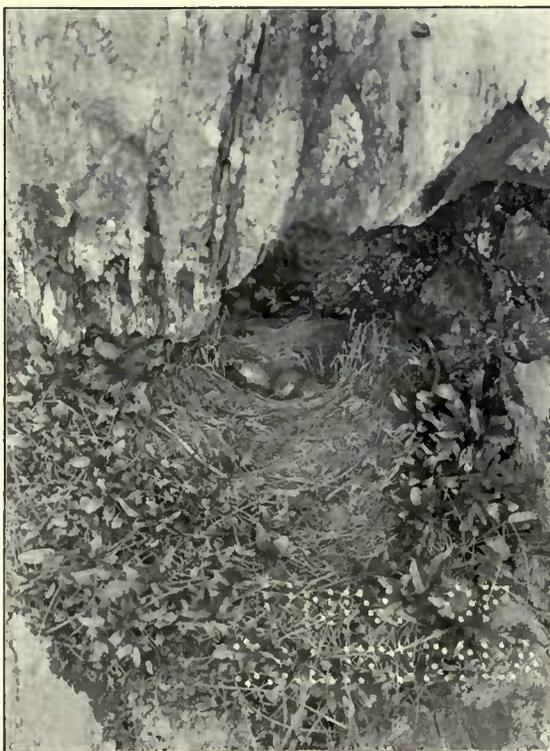


Photo by F. E. Daniel

Ring-ouzel's Nest

70 480
ABSTRACT 240

markings are slight or altogether wanting. (Pl. C.) Average size of 100 eggs, 1.14 × .84 in. [29 × 21.39 mm.]. Laying usually begins in March or early in April, and incubation lasts till the 14th or 15th day, and is chiefly performed by the hen, but the cock may occasionally be found on the nest. Two or three broods are reared in the season. The young remain about two weeks in the nest. [F. C. R. J.]

5. **Food.**—Worms, insects, snails, berries, fruit, occasionally grain, and in hard weather probably also shell-fish. “It is the most persistent fruit-eater of all the British birds” (Newstead). The young are fed by both parents mainly on worms and insects. [F. B. K.]

6. **Song Period.**—The regular period is from about the end of January to the third or fourth week in July, but the bird is to be heard “occasionally during the latter part of August” (C. and H. Alexander, *British Birds*, i. 369), in September and October, and, on mild days, even later. [F. B. K.]

RING-OUZEL [*Turdus torquatus*, Linnæus. Moor- or mountain-blackbird, crag-, tor- or fell-ouzel. French, *merle à plastron*; German, *Ringdrossel*; Italian, *merlo col petto bianco*].

1. **Description.**—The adult male is at once distinguished by its sooty-black plumage, relieved by a broad semilunar gorget of white, and narrow, more or less conspicuous, grey fringes to the median and lesser wing-coverts; similar fringes mark the rest of the body feathers after the autumn moult, but are gradually reduced by abrasion. (Pl. 37.) Length, 10 in. [254 mm.]. The female is browner, and has a narrower, duller gorget, the feathers thereof having brownish fringes. The pale marginal fringes to the feathers of the rest of the plumage are more marked in the female. Juvenile plumage: the fledglings have the upper surface sooty-black, the feathers being dark brown tipped with black, giving a slightly mottled appearance. The wing quills are dark brown, with pale whitish margins. The median and lesser wing-coverts are dark brown, with white shaft-streaks. The throat feathers are white tipped with black. On the forebreast (prepectus) the feathers are mottled with black and brown, a coloration formed by black feathers with a subterminal, transverse buff bar. The rest of the under parts are spotted and barred with black and white—spots on the middle of the breast, bars on flanks and abdomen. The under tail-coverts are black with white shaft-streaks, and more or less well-marked buffish white tips. [W. P. P.]

2. Distribution.—This is a mountain haunting species, of which three races are found in Europe. The northern race, *T. torquatus torquatus*, inhabits the hilly districts of the British Isles, and also visits Scandinavia in the breeding season, up to the North Cape, while *T. torquatus alpestris* is found in the mountains of Middle and South Europe, from Spain to the Balkans, and *T. t. orientalis* in the Caucasus, North Persia, and the mountains of S. Transcaspia. In England, the chief haunts of this bird in summer are the spurs of the Cumbrian and Pennine ranges, the Welsh mountains, and the Devonian hills; in Scotland it is fairly general on the moorlands, is found in the Orkneys, and in limited numbers on the Irish hills of all four provinces. Several isolated instances of nesting in the lowland counties of England have been reported, but in many cases these are probably due to confusion with partial albinos of the blackbird. [F. C. R. J.]

3. Migration.—Exceptional occurrences of the ring-ouzel in the British Isles during the winter months are not infrequent, but for the most part it is a summer visitor to the districts in which it breeds, and a bird of passage to and from these districts in many southern parts of the country. A certain number of individuals are birds of passage on their way to and from Scandinavia from Southern Europe. Further details are wanting as regards Scotland and Ireland, but some important facts have been discovered in England and Wales by the researches of the special committee of the British Ornithologists' Club. Many points are still doubtful, but the following may be regarded as fairly well established: that the summer visitant ring-ouzels arrive from the Continent late in March and early in April on the *western* half of our south coast, quickly spreading northwards and north-eastwards over England and Wales, and probably into Scotland. In the latter half of April an immigration takes place on the *eastern* half of the same coast. These are the birds of passage, already alluded to, on their way to Scandinavia. They cross the south-east of England—where the species is otherwise practically unknown—in a north-easterly direction, soon quitting our shores and crossing the North Sea. The autumn movements, which last till late October, have not yet been studied in such detail. This species is frequently recorded as migrating singly or in pairs, but it also travels in parties. (See further *B. O. C. Migration Reports*, i. pp. 17-19; ii. pp. 29-31; iii. pp. 37-39; and iv. pp. 41-44, and 183; cf. also Ticehurst, *B. of Kent*, 1909, pp. 13-14; and Nelson, *B. of Yorks.*, 1907, pp. 18-20.) [A. L. T.]

4. Nest and Eggs.—In the British Isles the nest is generally found on the ground, on a bank-side, or among rocks, often among heather, rarely in low

bushes or in a hedgerow. In structure it is not unlike a blackbird's, but is usually built externally of bracken stalks, sometimes moss or heather, with a layer of mud. The lining is of fine dry grasses. (Pl. XIV.) The cock has been seen to share in the work of building (Forrest, *Fauna of N. Wales*, p. 74; Bailly, *Ornith. de la Savoie*, ii. p. 214). Eggs, often 4, sometimes 5, and rarely 6, generally with a more distinctly blue-green ground and bolder markings than the blackbird's, and very like some varieties of the fieldfare's egg. (Pl. C.) Average size of 100 British eggs, $1.19 \times .84$ in. (30.3×21.5 mm.). Laying begins in the last fortnight of April, but most eggs are found about the second week of May. The cock is not known to assist in incubation. The period of incubation is about a fortnight. Two broods are certainly reared in some cases. [F. C. R. J.]

5. **Food.**—Worms, insects, snails, berries. The young are fed by both parents chiefly on worms and insects. [F. B. K.]

6. **Song Period.**—In this country during the breeding season. [F. B. K.]

WHEATEAR [*Saxicola œnanthe œnanthe* (Linnæus). Whiterump, horse-match, clodhopper. French, *traquet motteux*; German, *grauer Steinschmätzer*; Italian, *cul bianco*].

1. **Description.**—Distinguished by the white upper tail-coverts and the large amount of white at the base of the tail feathers. (Pl. 40.) The male in nuptial dress has the upper parts pearl-grey, more or less tinged with brown, a conspicuous black patch on the side of the head, and a broad white superciliary stripe extending forward to the forehead. The wing-coverts are dark brown—almost black—with narrow margins of pale brown; the wing quills are also dark brown, the secondaries having narrow margins of pale brown. The chin, neck and breast are of a rich buff, fading into pale buff on the flanks, while the abdomen is white. The tail feathers have the basal half, or rather more, pure white, the rest black, except the two middle feathers, which have the exposed portions black, the base white. After the autumn moult the grey of the upper parts is hidden by the broad brown fringes of the feathers. The ear-coverts are of a rufous brown, shading into greyish brown, instead of black; while the throat, fore-breast, and flanks are of a fawn colour; the lower breast, abdomen, and under tail-coverts are cream-coloured. The wing quills and tail feathers have more or less conspicuous greyish white tips. The female resembles the male in autumn dress, but is duller. She may be distinguished from the female Isabelline-wheatear by her smaller size, greater amount of white in the tail, and the darker coloration of the under wing-coverts. The juvenile plumage

differs conspicuously from that of the adult. The head has indistinct, greyish striations on a chocolate ground, while the back is of a greyish brown. The wings resemble those of the adult in autumn. The throat and fore-breast are buff, each feather tipped brown to form indistinct transverse bars; the lower breast and abdomen are fawn-coloured. Full-grown young are greyer above, and have indistinct striations, and crescentic bars on the scapulars and interscapulars. The throat is buff-white, while the fore-breast is buff, relieved by more or less conspicuous dusky bars. The flanks, mid-breast, and abdomen are pale buff. After the autumn moult the crown and back are of a rufous chocolate, intermingled for some time with the grey striated feathers of the earlier plumage. [W. P. P.]

2. Distribution.—The species is generally distributed over the whole of Europe and Northern Asia in suitable localities. Two forms visit the British Isles, the ordinary continental race, *S. œnanthe œnanthe* (L.), which breeds with us, and the Greenland race, *S. œnanthe leucorhoa*, which passes on migration. In the British Isles the wheatear avoids well-wooded districts, and is found on bare, open downs, sandy warrens, and stony hillsides, but is somewhat local, and is altogether absent from many districts. [F. C. R. J.]

3. Migration.—Apart from occasional exceptional occurrences, the wheatear is a summer visitor and a bird of passage in the British Isles. It appears early in March. Some remain till late October, but March, April and September are the months of the chief movements. The recent researches of a special committee of the British Ornithologists' Club have elicited some details regarding the spring immigration into England and Wales. This takes place "along the whole of the south coast, but first and chiefly on the western half," in a series of successive "waves," which quickly spread inland. Some half-dozen such waves are noted each season between mid-March and mid-May. At first they consist of our own breeding birds, but later they become mixed, and finally the last two waves or so are composed entirely of members of the larger race, *S. œnanthe leucorhoa*, which is merely a bird of passage in our area. These last waves reach only the eastern half of the south coast, and the birds evidently merely cross the south-east of England in a north-easterly direction. (See further *B. O. C. Migration Reports*, i. pp. 20-24; ii. pp. 32-40; iii. pp. 40-45; and iv. pp. 45-52.) Among our own wheatears the males appear a fortnight before the females (cf. Ticehurst, *B. of Kent*, 1909, pp. 15-18). Return movements begin in August, but have not yet been fully studied. The species is a nocturnal migrant, and travels in small parties. A gentleman "going to Canada, in August 1883, observed two wheatears come on board



Photo by W. Farren

Hen wheatear about to enter its nesting hole

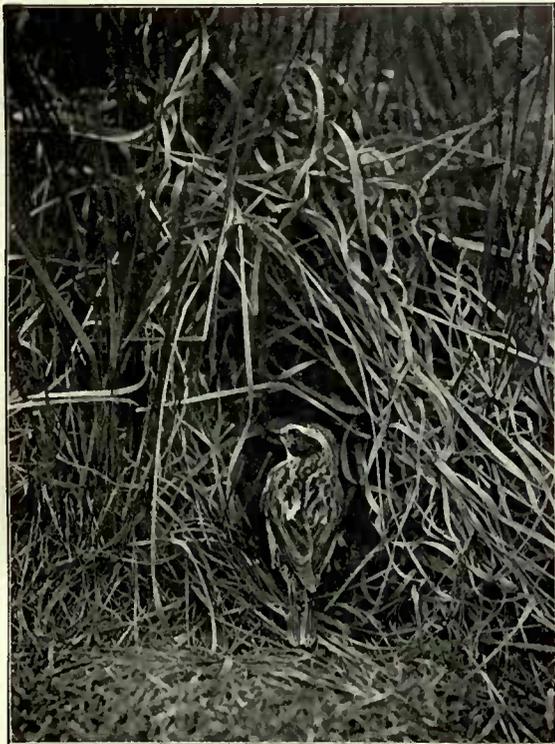


Photo by E. L. Turner

Whinchat at the entrance to its Nest

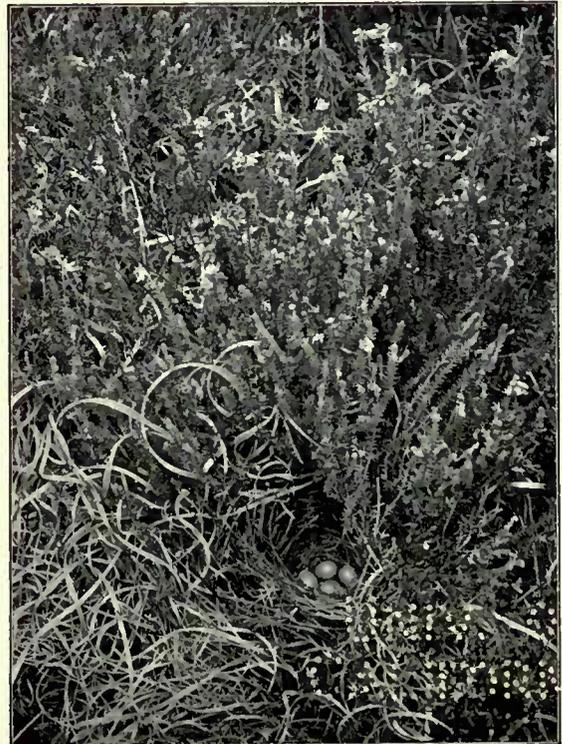


Photo by H. Bentham

Whinchat's Nest

to visit
arranged

the day after he had sailed from Ireland, and they stayed on or about the ship until she reached America" (Ussher and Warren, *B. of Ireland*, 1900, p. 8). [A. L. T.]

4. **Nest and Eggs.**—The nest is generally well hidden in a hole, under stones or rocks, in rabbit-burrows, or almost any natural crevice; occasionally in curious sites, such as old kettles, drain-pipes, shells, or even in a sand-martin's hole. It is loosely constructed of grasses, with sometimes moss, hair, wool, or a feather or two added. (Pl. xv.) The male assists the female in building (Saxby, *Birds of Shetland*, p. 69). Eggs generally 6, sometimes 5 or even 7 in number, pale blue, generally unmarked, but occasionally speckled with dark red-brown. (Pl. C.) Average size of 100 eggs, $81 \times \cdot 61$ in. [$20\cdot 7 \times 15\cdot 5$ mm.]. The eggs are laid about the end of April or early in May, and incubation is chiefly performed by the hen, although the cock also takes his turn occasionally (Saxby, *l. c.*). Period of incubation about a fortnight. Two broods are generally reared in the Shetlands, but in England I have usually found that only one is reared. [F. C. R. J.]

5. **Food.**—Chiefly insects. The young are fed by both parents on insects and their larvæ, spiders, occasionally molluscs (see p. 399). On migration the birds will follow the ebb tide. [E. L. T.]

6. **Song Period.**—From the end of April to the beginning of June. [E. L. T.]

GREENLAND WHEATEAR [*Saxicola œnanthe leucorhoa* (Gmelin)].

1. **Description.**—A larger and longer-winged race than the preceding, and differs from it in having in winter plumage the underside, especially the chin, throat and forebreast, a vivid rust colour (*rostfarbe*), and the same parts less pale in breeding plumage. (Hartert, *Vögel der Paläarktischen Fauna*, i. p. 681). [F. B. K.]

2. **Distribution and Migration.**—Breeds in N.-E. America, Greenland, Iceland, and Færoes. Migrates to winter-quarters in W. Europe, Africa—at least as far south on the west as Senegambia, and on the east as Fashoda, the Canaries and Azores,—and in America south to New York, Colorado, Louisiana. It is in our Isles only a bird of passage on its way to and from Greenland, Iceland and the Færoes. [F. C. R. J.]

WHINCHAT [*Pratincola rubetra* (Linnæus)]. Utick, grasschat, furzechat, hay-bird. French, *tarier ordinaire*; German, *braunkehliger Wiesenschmätzer*; Italian, *stiacchino*].

1. **Description.**—Readily distinguished from the stonechat at all ages and seasons by the length of the remicle (bastard quill), which does not exceed the

major coverts of the primaries in length, and by the extensive area of white at the base of the tail. (Pl. 42.) The male in nuptial dress has the upper parts of a pale ochreous brown, relieved by broad black striations, while the rump has a rufous tinge. The cheeks and ear-coverts are black, and bounded above by a broad superciliary streak of white extending forward to the nostrils, and below by a white line running from the chin backwards to the side of the neck. The wing, in fully adult birds, bears two white patches: one very conspicuous oblong bar formed by the innermost median and major coverts, and a smaller formed by the bases of the major coverts of the primaries, the rest of the feathers being black. This second patch varies in size according to age, and is wanting in immature birds. The secondaries are of a dark sepia brown, with narrow margins of pale brown along the outer web, and pale grey tips. The basal half of the tail is white, save the two middle feathers, which have less white: but the whole of the white area is concealed by the tail-coverts when the tail is closed. The throat and fore-breast and flanks are of a rich cinnamon rufous, while the lower breast and abdomen are dull white. Length, 5.4 [140 mm.]. After the autumn moult the plumage recalls that of the female, and is much yellower, the feathers having broad fringes of ochreous brown, which later are reduced by abrasion, and so accentuate the broad longitudinal stripes of black which run down the centres of the feathers. By this process of abrasion the crown may become nearly black in the nuptial dress. The female can be distinguished from the male at the same season by the very pale colour of the fore-breast and flanks, which are of a brownish buff, the small white patch in the region of the elbow, and the absence of the white patch at the base of the major coverts of the primaries. The female in autumn is not readily distinguished from the male at the same season, but the male always has a white patch at the base of the primary major coverts, which is wanting in the female, while the patch at the elbow-joint is much smaller. In immature birds of both sexes the fore-breast is marked by small, sharply-defined, dark brown spots. In the juvenile plumage the crown is of a dark brown narrowly striated with pale brown, while the back is of a rufous brown striated with pale brown and black, black replacing the brown shaft-streaks on the lower interscapulars, while on the middle interscapulars a black oval stripe occurs on each side of the median brown shaft-streak, giving a blotched effect. The throat is dull-white, the fore-breast ochreous with dusky mottlings, the flanks rufous, and the lower breast and abdomen dull white. The base of the tail is white.

[W. P. P.]

2. Distribution.—Generally distributed over the British Isles and the greater part of Europe, but absent from the high north, the greater part of the Iberian peninsula and Greece, while local forms occur in Dalmatia and the Caucasus. In the British Isles it is scarce in Cornwall, only occurs on passage in South Ireland, and is absent from some parts of Scotland and rare in the Outer Hebrides and Orkneys, while it is only a rare straggler to the Shetlands. [F. C. R. J.]

3. Migration.—Leaving occasional exceptional instances out of consideration, the whinchat is a summer visitor to those parts of our islands wherein it breeds, and a bird of passage to and from those parts in some others, such as the south of Ireland. A few stragglers may appear in March, but the first important arrivals are in the second half of April in the south of England and the first half of May in the north of Scotland. The return movement commences in August, and all but a few stragglers have left by early October. The spring immigrants arrive from the Continent in a series of "waves" on the coasts of the south-eastern counties of England, and thence spread over the whole of England and Wales. Details are lacking of the autumn migration in England and Wales, and of both migrations in the other parts of the area. The whinchat travels in small parties. (See further, *B. O. C. Migration Reports*, i. pp. 25-27; ii. pp. 39-41; iii. pp. 46-49; and iv. pp. 53-56; N. F. Ticehurst, *Birds of Kent*, p. 20.) [A. L. T.]

4. Nest and Eggs.—The nest is generally placed on the ground in mowing grass or at the bottom of some small bush, and composed of dried grasses and a little moss, lined with a cup of finer grasses and cow or horse-hair. (Pl. xv.) Whether the male assists the hen in building appears to be unrecorded. Eggs, 5, or more commonly 6, rarely 7 in number: rather deep greenish blue, generally with fine specks of rusty brown especially towards the big end. (Pl. C.) Average size of 100 eggs, $\cdot 73 \times \cdot 56$ in. [$18\cdot 6 \times 14\cdot 37$ mm.]. They are seldom laid before the second or third week of May, and incubation, which lasts about 14 days, is chiefly if not wholly, performed by the hen. Howard Saunders says that two broods are reared, but many pairs appear only to nest once. [F. C. R. J.]

5. Food.—Chiefly insects and their larvæ, spiders, also according to H. Saunders (*Manual*, p. 28) worms and small molluscs. The young are fed by both parents chiefly on insects and their larvæ, and no doubt also spiders.

[E. L. T.]

6. Song Period.—From about the end of April to the end of June.

[E. L. T.]

BRITISH - STONECHAT [*Pratincola torquata hibernans*, Hartert.
Furzechat, stoneclink, stonehacker, winter-utick. French, *tarier*; German,
Wiesenschmätzer; Italian, *stiaccino*].

1. Description.—Distinguished at all ages and in both sexes from the whinchat by the remicle (bastard quill), which is much longer than the major coverts of the primaries. (Pl. 41.) The male, in nuptial dress, has the head and back black, relieved by white upper tail-coverts, a large white patch over the bases of the inner secondaries, and at the side of the neck. The prepectoral region is of a rich chestnut, paler on the flanks; while the breast and abdomen are of a dull buff, or buff-white. Length, 5·3 in. [135 mm.]. After the autumn moult heavy brown fringes mask the black of the upper parts, and the white of the upper tail-coverts—which have a sub-terminal oval spot of black and a dark shaft-streak—is concealed by rust-colour. In many cases these brown fringes are never wholly lost. The female after the autumn moult is of a wood-brown above, passing into ochreous on the back, and rufous on the upper tail-coverts—relieved by more or less distinct dull black striations. As the season advances, the brown hue is reduced by abrasion producing the summer dress in which the upper parts appear more distinctly and more heavily striated. The white wing-patch is smaller than in the male. The throat in old females is black, and there is a trace of the white patch at the side of the neck. Generally heavy brown fringes mask the black throat and the white neck-patch. The fore-breast is of a pale chestnut brown, the lower breast and abdomen brownish buff. The young in the first or juvenile plumage are of a dark sepia marked with broad striations of pale brown. The tail-coverts are rufous. The inner secondaries are dark brown, with broad margins of rufous brown. The fore-breast is of a light ochreous buff, mottled with dark brown and rufous; flanks, breast, and abdomen pale wood-brown. The young stonechat differs from the young whinchat in having no white at the base of the tail, and in lacking black striations on the interscapulars. [W. P. P.]

2. Distribution.—Some form of stonechat is to be found throughout the greater part of the European, Asiatic, and African continents. Two, if not three forms occur in Great Britain. The Siberian-stonechat (*P. torquata maura*) is a very rare visitor. The continental form (*P. torquata rubicola*) occurs possibly as a migrant (see Migration). Our British local race is *P. torquata hibernans*, Hart.; it is confined to the British Isles, where it is a somewhat local resident, especially

haunting gorse-covered commons in sheltered situations near the coast. In those localities where the winters are severe, it is only partially resident or a summer migrant, but it is found in small numbers in the Orkneys, although it does not breed in the Shetlands. On the Hebrides it is not uncommon, and has been noted on St. Kilda, while in Ireland it is very general. [F. C. R. J.]

3. Migration.—Resident as a species, but a proportion of the individuals perform true migratory movements within our area apart from the mere local changes in the altitude or nature of haunts. A general decrease in winter in the northern districts and a corresponding increase in the southern parts is very marked in Great Britain, less so in Ireland. A slight autumn and spring migration has been observed on the Yorkshire coast. This may be explained by local movements of our resident birds, or possibly by the occurrence of the continental-stonechat (*P. torquata rubicola*). Further evidence is needed. There is little or no evidence of autumnal emigration to countries further south. (See further Nelson, *B. of Yorks.*, 1907, pp. 31-32; and Ussher and Warren, *B. of Ireland*, 1900, p. 10.) [A. L. T.]

4. Nest and Eggs.—Carefully concealed, generally at the foot of some furze bush or among heather, in a clump of cotton grass or in thick blackthorn scrub. It is placed either on the ground or close to it, and is built of moss, bents and stalks, with sometimes a few thistle leaves or small twigs, lined with finer bents and horse-hair, as well as occasionally feathers, bits of wool, etc. (Pl. XVI.) Whether the male assists the female in building appears not to be recorded. Eggs generally 5 or 6, rarely 7, in number, pale bluish green, generally with a zone of fine reddish brown spots. (Pl. C.) Average size of 100 eggs, $\cdot74 \times \cdot57$ in. ($18\cdot8 \times 14\cdot4$ mm.). The first eggs are laid towards the end of March, but most eggs are laid at the beginning of April, and in some inland spots not till late in that month. Incubation, which lasts 14 days, is, principally at any rate, performed by the hen, the cock keeping a vigilant look-out close at hand. A second brood is usually reared. [F. C. R. J.]

5. Food.—Chiefly insects and their larvæ, spiders, also ova of worms (Newstead), small lizards, and, according to H. Saunders (*Manual*, p. 30), worms and a few seeds. The young are fed by both parents on insects and their larvæ, spiders, and occasionally small lizards. [E. L. T.]

6. Song Period.—From about the end of March till the middle or end of June. [E. L. T.]

REDSTART [*Phoenicúrus phoenicúrus* (Linnæus). *Ruticilla phoenicúrus* (L.).

Firetail, redtail, redster. French, *rouge-queue* ; German, *Garten-rotschwanz* ; Italian, *codirosso*].

1. Description.—Distinguished from the black redstart by the white forehead and the copper-red colour of the breast and flanks. (Pl. 43.) The male in nuptial dress has the forehead white, bounded in front by a black bar extending to the lores, the crown, neck and back bluish slate-grey, the lower rump and upper tail-coverts rich chestnut ; the tail a rather duller red ; the two middle tail-feathers dusky. The wings are dark brown. The throat, sides of the face and neck jet black, breast and flanks rich coppery chestnut, darkest on the fore-breast : abdomen white. Length, 5·4 in. [140 mm.]. After the autumn moult the grey of the upper parts is masked by long brown fringes which terminate the new feathers. The inner secondaries have broad margins of pale brown, while the black throat has a hoary appearance, each feather having a white terminal fringe. The female has the upper parts of a uniform brownish grey ; but the rump and tail resemble those of the male. The throat and abdomen are of a dirty white, the fore-breast and flanks rufous buff. She may be distinguished from the female black redstart in having a white throat and abdomen, rufous-buff flanks, buff axillary feathers, and white under tail-coverts tinged with buff. The juvenile dress is brownish grey above, mottled with dull yellowish spots, half encircled by narrow loops of black. The tail is as in the adult. The under parts are buff-white, each feather on the fore-breast and flanks tipped with a semicircular fringe of dark brown. The median coverts have terminal spots of ochre-yellow, while the major coverts and inner secondaries are dark greyish-brown margined with ochreous brown. [W. P. P.]

2. Distribution.—A summer visitor to the British Isles and the whole of the European Continent,—except Spain south of the Cantabrian range, Greece, the Crimea, and South-east Russia,—and to West Siberia. Other sub-specific forms occur in Algeria, and from South Russia to Asia Minor and Persia. In the southern portions of its range it chiefly inhabits mountain ranges. In Great Britain it is somewhat local, but breeds in the woodlands of most of our English counties, though rarely in Sussex, West Devon, Cornwall, and Pembroke. In Scotland it now breeds in the woods of the Moray area plentifully, and in smaller numbers in West Ross, Sutherland and Caithness, while it has once been noted as nesting in the Shetlands, but not in the Orkneys or Outer Hebrides. Its range in Ireland



Photo by W. Farren

Cock Stonechat perched in front of its Nest

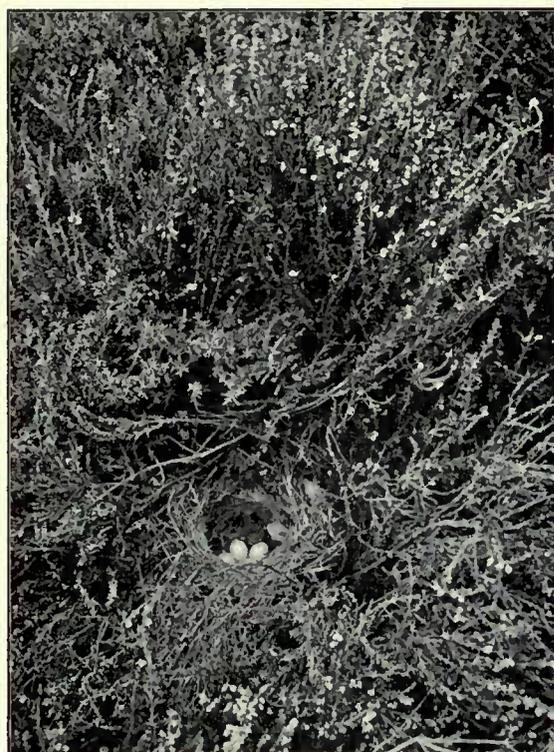


Photo by H. Bentham

Stonechat's Nest



Photo by E. A. Wallis

Redstart's Nest in a wall

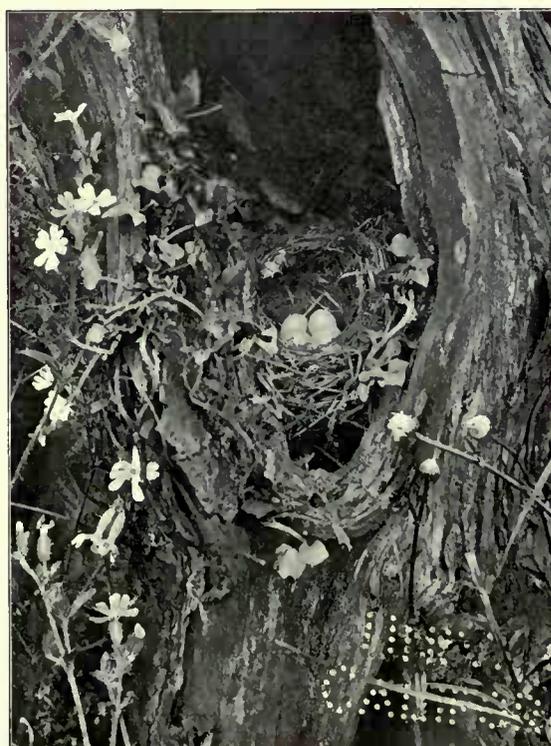


Photo by Charles Reid

Redstart's Nest in a tree

is extremely limited, and it is only known to breed in Co. Wicklow and Tyrone. (For notes on the spread of this species in Scotland, see J. A. Harvie Brown and T. E. Buckley, *Vertebrate Fauna of the Moray Basin*, i. p. 227.) [F. C. R. J.]

3. Migration.—The redstart is a summer visitor to many parts of the British Isles, but in some others is only known on passage to and from these favoured districts. In addition, a number of individuals are mere birds of passage to our area as a whole, migrating, presumably between southern and northern Europe, by way of the eastern seaboard of Great Britain. As a summer visitor the species is with us from mid-April till September, although stragglers may be recorded outside this period. The English breeding birds arrive from the Continent in spring mainly on the south-eastern coasts, from which each successive "wave" spreads rapidly inland over the country. The males appear a few days before the females. The redstart is often taken at the lighthouse lanterns, and it frequently migrates along with the wheatear; there is indeed much in common between the movements of the two species. (See further *B. O. C. Migration Reports*, i. pp. 28-30; ii. pp. 42-45; iii. pp. 50-53; and iv. pp. 57-60; and Nelson, *B. of Yorks.*, 1907, pp. 34-35.) [A. L. T.]

4. Nest and Eggs.—The nesting site is normally in a hole of a tree or wall, but many instances are on record of its breeding in exceptional places, such as among grass on the ground, under stones, in a flower-pot, a human skull, or an old thrush's nest. Some nests are at a considerable height, while others are on or only just above the ground level. The nest is slightly built of dry grasses, fibre, strips of bark, rootlets, and a little moss, lined with horsehair and feathers. (Pl. XVI.) Whether the cock assists in its construction is not certain. The eggs, usually 5 to 7 in number, rarely 8 or 9, are pale blue, generally without markings, but occasionally spotted with red brown. (Pl. C.) Average size of 100 eggs, $\cdot 79 \times \cdot 55$ in. [$18\cdot 28 \times 13\cdot 9$ mm.]. They are laid about the second or third week of May as a rule, and incubation, which lasts 14 days (W. Evans, *Ibis*, 1892, p. 57), appears to be carried on chiefly by the hen, but Naumann says that the cock relieves her in the afternoon. Two broods are sometimes reared in the south, but the majority are certainly single brooded in England. [F. C. R. J.]

5. Food.—Chiefly insects and their larvæ, also spiders, worms, and berries. The young are fed by both parents on insects and their larvæ, and small worms. [F. B. K.]

6. Song Period.—From April to June. Whether the song is resumed after the moult is not recorded. [F. B. K.]

BLACK-REDSTART [*Phœnicúrus ochruros* (Gmelin). *R. titys*, Scopoli.
French, *rouge-queue noir*. German, *Haus-Rotschwanz*; Italian, *codirosso spazzacamino*.

1. Description.—Distinguished from the common redstart by its general black and grey hue. The crown and rump are of dark bluish slate-grey, the tail and upper tail-coverts a rich dark chestnut red, save the two middle tail-feathers, which are black. The rest of the upper parts, and the sides of the head and the under parts, with the exception of the hinder flanks and abdomen, deep velvet black, abdomen and hinder flanks slate-grey, under tail-coverts pale rust-red. (Pl. 44.) Length 5·75 in. [146 mm.]. After the autumn moult the feathers are broadly tipped with grey, giving the plumage a light slate-grey hue, save on the lower rump, upper tail-coverts, and tail, which are red. The innermost secondaries have broad fringes of white forming a conspicuous white patch, lost later by abrasion. The female resembles the female of the common redstart, but may be distinguished by her greyer coloration, the uniform mouse-colour of throat, breast, and flanks, the rich buff of the under tail-coverts, and the mouse-grey colour of the axillaries. The juvenile plumage resembles that of the adult female, therein differing conspicuously from the nestling plumage of the common redstart. [W. P. P.]

2. Distribution.—The race that visits our shores (*Phœnicúrus ochruros gibraltariensis*) is generally distributed over the Continent between the Mediterranean and the North and Baltic Seas, but in the southern portions of its range is chiefly confined to mountain ranges, and does not extend further east than south-western Russia and possibly also the Crimea. Other races of the same species are found in the Caucasus and Asia Minor, *R. ochruros ochruros* (Gm.), as well as in Palestine, *R. o. semirufa* (H. and E.), Turkestan to Kashmir, *R. o. phœnicuroïdes* (Moore), and Tibet, Mongolia, etc., *R. o. rufirentis* (Vieill.). [F. C. R. J.]

3. Migration.—It is a fairly frequent visitor for varying periods, usually in autumn and winter, to the coasts of Great Britain and Ireland, especially the southern. It occurs also as a bird of passage (cf. Saunders, *Ill. Man. Brit. B.*, 1899, p. 33; *British Birds*, i. p. 54; Ticehurst, *B. of Kent*, 1909, pp. 24-30; and Nelson, *B. of Yorks.*, 1907, pp. 36-37). [A. L. T.]

4. Nest and Eggs.—Although none of the supposed cases of the breeding of this species in England will bear investigation, there seems to be no reason why it should not occasionally nest with us. In inhabited districts the nest is usually placed in a shed or some opening in a wall; but where buildings are not available,

it is found in crevices of the rocks and occasionally in old swallows' nests, but hardly ever in trees. It is rather bulky, and is composed of moss, stalks, dry grass, neatly lined with finer grasses, hair and feathers. It is built by both sexes, chiefly by the female (C. G. Beauchamp, *Field*, Nov. 5, 1910). The eggs, 4 to 6, sometimes 7 in number, are, as a rule, white, without markings, but exceptional instances have been recorded of pale blue eggs and also clutches which showed traces of red spots. Average size of 82 eggs, $\cdot76 \times \cdot56$ in. [$19\cdot4 \times 14\cdot37$ mm.] Full clutches are not, as a rule, found before the beginning of May in Central Europe. The incubation period lasts about 13-14 days and is performed by the hen, or chiefly by the hen, if Naumann is correct in stating that the cock relieves her each day for about two hours. Two broods are generally reared. [F. C. R. J.]

5. Food.—Chiefly insects and their larvæ, also spiders, worms, berries. [F. B. K.]

REDSPOTTED-BLUETHROAT [*Cyanecula svecica gætkei* (Kleinschmidt). *C. svecica* (L.). French, *gorge-bleue*; German, *rotsterniges Blaukehlchen*].

1. Description.—This species may be distinguished from the redstarts in having the red on the tail confined to the basal half. (Pl. 44.) The male in nuptial dress can be recognised at once by the cerulean blue of the throat, set off by a patch of chestnut red, and bounded posteriorly by a double band of black and chestnut red, the latter of variable width. Occasionally a narrow band of white is interspersed between the black and red bands. The upper parts are of a greyish brown, the lores black, and the superciliary stripe white. The breast, abdomen, and under tail-coverts are white, and the flanks are tinged with buff. The tail, from the base to the middle, is of a deep chestnut red, except the two middle feathers, which are dark brown throughout. After the autumn moult the colours of the blue gorget and its bands are obscured, the feathers being tipped with white. The female differs from the male, having the throat white, bounded posteriorly by a semicircular band of dusky, white-tipped feathers, behind which runs a more or less distinct band of pale chestnut. The breast and abdomen are white, the flanks and under tail-coverts buff. Very old females sometimes develop a more or less distinct blue gorget like that of the male. In the juvenile, or fledgling plumage, the upper parts are of a very dark brown, almost black, relieved by pale brown striations, very narrow on the crown, broad on the back, but passing into mottlings on the rump. The upper tail-coverts are rust-coloured. The wings

are greyish brown, the major and median coverts having rust-coloured tips, and the inner secondaries rust-coloured margins. The fore-neck, fore-breast, and flanks are dusky, and striated with pale brown. These striations are formed by broad brown shaft-streaks running down very dark brown feathers. With age the plumage becomes lighter, owing to the loss by abrasion of the dark areas of the feathers. [W. P. P.]

2. Distribution.—The bluethroat has a wide range over the greater part of the European and Asiatic continents, and is divided into numerous local forms. The northern races have the throat spot red, while in southern forms it is usually white. One of the latter (*C. svecica cyanecula*) has reached us a few times. The red-spotted birds (*C. svecica gætkei*) which visit our east coasts on passage belong to a large race which breeds in some of the central mountain ranges (Fille Fjeld, Dovre Fjeld and possibly elsewhere) of Norway. In Sweden, Lapland, North Russia and West Siberia *C. svecica svecica* (L.) replaces it, and other races have been described from West Turkestan, the Altai district, and Eastern Siberia.

3. Migration.—A bird of passage through a limited portion on the north and east of the British area. There are a few records for the Outer Hebrides, Orkney and Fair Isle (Shetlands). On the east coast of England and in Sussex and Surrey it is rare, but in Norfolk it may be looked for each year as a regular arrival in small numbers. The birds that visit us appear to be the scattered wing of the main body of the migrants, which pass further east (Heligoland, Holland) on their way to Northern Africa, probably its north-west side (Hartert, *Vögel der Paläarktischen Fauna*, i. p. 745). The species is chiefly seen on the southward migration, and mostly in September. It is a nocturnal migrant (cf. Saunders, *Man. Brit. Birds*, 1899, pp. 34-35; *British Birds*, i. p. 55; Nelson, *B. of Yorks.*, 1907, pp. 39-41; Ticehurst, *B. of Kent*, 1909, pp. 27-30; Gätke, *Vogelwarte Helgoland*, Eng. Trans., 1895, pp. 264-69, etc.). [A. L. T.]

4. Nest and Eggs.—The species does not breed in the British Isles. [F. C. R. J.]

5. Food.—Insects, worms, and berries. [F. B. K.]

BRITISH-REDBREAST [*Erithacus rubécula melophilus* (Hartert).

Robin, ruddock. French, *rouge-gorge*; German, *Rotkelchen*; Italian, *pettirosso*].

1. Description.—The sexes are alike, and distinguished by the bright orange or tawny red of the throat and fore-breast. (Pl. 45.) Length, $5\frac{3}{4}$ in. [148 mm.].

The upper parts are of a uniform olive-brown, less olive on the wings and tail. The inner secondaries have narrow margins of golden brown, and the major coverts, terminal spots of the same hue. The forehead, lores, sides of the head and neck, throat and fore-breast are of a bright tawny red, bounded on the sides of the neck and breast with a narrow margin of blue-grey. The flanks are pale olive-brown, and the mid-breast and abdomen white. The female is slightly less brightly coloured. The juvenile fledgling plumage differs conspicuously from that of the adult, being spotted and streaked with buff on a ground of ochreous brown. The spots are more or less confined to the crown, where the feathers are of a dark brown colour with a central area of bright buff. The feathers of the back and wing-coverts are ochreous brown with shaft-streaks of buff, and narrow terminal bands of very dark brown, forming more or less distinct crescents. The throat, fore-breast, and flanks are buff yellow, dusky tips to the feathers giving a mottled appearance, especially to the fore-breast. The abdomen is buff-white, and the under tail-coverts are buff. After the autumn moult the young birds are distinguishable from the adults only by the slightly paler colour of the breast. [W. P. P.]

2. Distribution.—Redbreasts are found in the British Isles, the European Continent, North-west Africa, the Azores, Canaries, and Mediterranean Isles, as well as in West Siberia, Transcaspia, and North Persia. Two forms of this species occur in the British Isles. The Continental-redbreast, *E. rubecula rubecula* (L.), which occurs as a bird of passage on our shores, inhabits Europe from about 68° north to the Mediterranean and east to West Siberia and part of Turkestan; but is replaced by other forms in the Caucasus, Corsica and Sardinia, etc., although found in the Azores, Madeira, and some of the Canary Isles. The British-redbreast, *E. rubecula melophilus* (Hart.), is resident throughout Great Britain and Ireland, and also nests in the Orkneys and on Barra in the Outer Hebrides, where it has bred since 1891, but not in the Uists or Benbecula. Other forms of this species have been described from North-west Africa, Teneriffe, and Northern Persia. [F. C. B. J.]

3. Migration.—Resident as a species, and many individuals are stationary. There seems to be almost no evidence of migration in Ireland, and in the south of England the breeding birds are believed to be quite stationary. In autumn the young birds scatter over the country, but they may perform nothing more than local movements. In the more northerly parts of Great Britain, some at any rate of the breeding birds appear to move southwards in winter. A considerable autumnal passage of birds of the continental race (*E. r. rubecula*), presumably

from Scandinavia takes place on the eastern and south-eastern coasts of Great Britain, with a return passage from S. Europe or W. Africa in spring. There is also a slight autumn emigration and spring immigration on the south coast, but whether this chiefly affects our own or the continental birds does not seem to have been established (cf. Nelson, *B. of Yorks.*, 1907, pp. 42-43; Ticehurst, *B. of Kent*, 1909, pp. 30-31; etc.). [A. L. T.]

4. Nest and Eggs.—The Continental-redbreast does not breed in the British Isles. The British-redbreast builds generally in a hollow on a bank-side, in a hole of a wall or tree, and frequently among ivy. But occasionally almost any kind of hole is made use of, from a sand-martin's burrow to an old nest of some other bird or the interior of an old kettle, shoe or hat, and it is often found in sheds and out-houses. It is often rather bulky, constructed of dead leaves, grasses, and moss, lined chiefly with hair and a few feathers at times. (Pl. XVII.) It is constructed chiefly, if not entirely, by the hen. Eggs generally 5 or 6, sometimes 7, and rarely 8 or 9, are white, generally more or less freckled with light sandy red, sometimes so closely as to obscure the ground, and at times boldly marked with a few spots or entirely without markings. (Pl. C.) Average size of 100 eggs, $\cdot78 \times \cdot61$ in. [$19\cdot87 \times 15\cdot5$ mm.]. The breeding season normally begins about the end of March or early in April, though nests may be found occasionally in the winter months. Incubation lasts 13-14 days (W. Evans, *Ibis*, 1891, p. 57), and according to Naumann is performed by both sexes alternately, the cock sitting in the afternoon. Two or three broods are reared during the season. [F. C. R. J.]

5. Food.—Worms, insects, small snails, spiders, berries, occasionally seeds. The young are fed by both parents, chiefly on worms and insects. [F. B. K.]

6. Song Period.—All the year, but only occasionally during the periods of moult in July and early August. The young of the year may be heard uttering a low warble before and during their moult. The earliest date on which I have heard the latter is July 30. [F. B. K.]

CONTINENTAL-REDBREAST [*Erithacus rubécula rubécula* (Linnæus)].

1. Description.—Distinguished sub-specifically from the preceding by having the upper surface lighter, less rufous, the throat a less deep red, and the sides of the body lighter (Hartert: *Vögel der Paläarktischen Fauna*, pp. 750, 752; *British Birds*, i. p. 219). [F. B. K.]

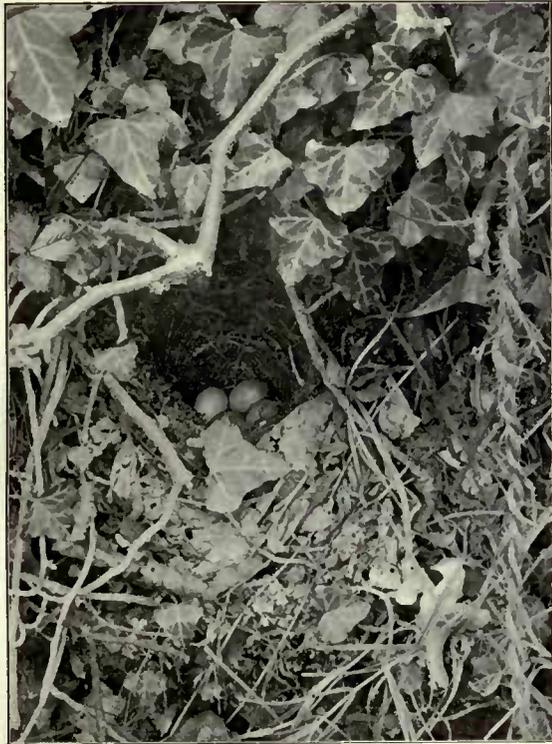


Photo by F. B. Kirkman

Robin's Nest. Typical site



Photo by W. Farren

Robin's Nest in an old hat



Photo by W. Farren

Nightingale's Nest. Typical site

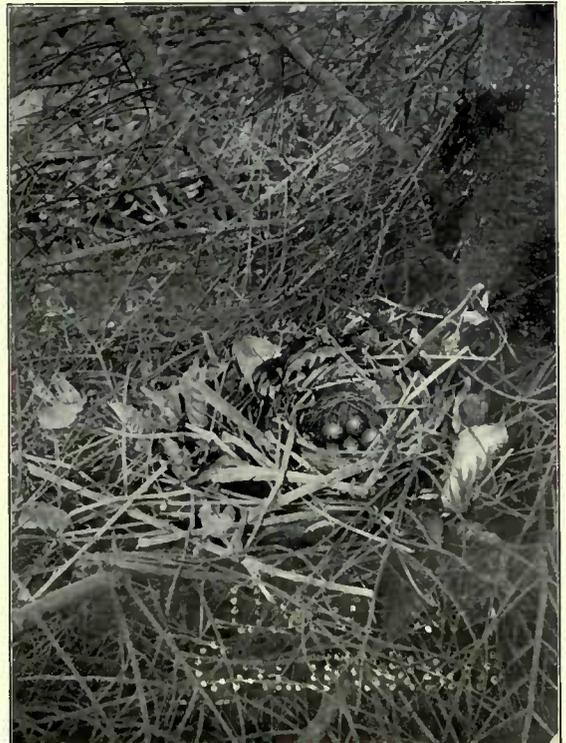


Photo by W. Farren

Nightingale's Nest on one of the lower branches of a larch. Unusual site

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2-3. Distribution and Migration.—As above stated, this form occurs in Great Britain only as a bird of passage in autumn and spring. Its distribution is described on p. 343. [F. C. R. J.]

NIGHTINGALE [*Luscinia megarhynchos* (Brehm.). *Daulias luscinia* (L.).
French, *rossignol*; German, *Nachtigall*; Italian, *rusignolo*].

1. Description.—This species may readily be distinguished by the uniform russet colour of the upper parts, and the pale chestnut tone. (Pl. 46.) The sexes are alike in plumage, and have the whole of the upper parts of a uniform russet-brown hue, shading into pale chestnut on the upper tail-coverts and tail; in the latter, however, the two middle feathers are brown. The throat is white, the sides of the neck, the fore-breast and flanks are ashy grey faintly tinged with brown, while the middle of the breast and abdomen are white, and the under tail-coverts buff. Length of male, 6.5 in. [145 mm.]. The juvenile fledgling plumage differs from that of the adult in being conspicuously rufous above, relieved by buff spots. On the crown these are well defined, less so on the back where each feather has a narrow free edge of black. The tail is redder than in the adult. The under parts are white, tinged on the throat and flanks with buff. The throat feathers have narrow free edges of black forming more or less conspicuous transverse bars; similar, but wider and more conspicuous, semi-crescentic bars mark the fore-breast. The flanks are slightly tinged buff and indistinctly mottled black. The lesser wing-coverts, it should be noted, have large buff spots margined with black, while the major coverts are tipped with buff, and the inner secondaries have faint buff tips. [W. P. P.]

2. Distribution.—A summer visitor to the southern part of Great Britain and to the Continent from the North Sea and Baltic Sea to the Mediterranean. East of Germany and Hungary its breeding limits extend to parts of Poland, South-west Russia, the Crimea, and Asia Minor, while southward its range extends to the islands of the Mediterranean and North-west Africa. In Great Britain it is generally distributed through all the country lying south and east of a line drawn from the Wash to the Severn, with the exception of Cornwall and Devon (except on the south-east side), and Somerset, where it is still local and thinly distributed. Beyond this line it occurs in South, but is scarce in North, Lincoln. It is common in Rutland, thinly distributed in Leicester and Warwick, but scarce in the north of the latter county: fairly general in Worcester, but local in Hereford and Monmouth, while in Glamorgan it is confined to the eastern half. Scattered pairs nest

in Brecon, and in Salop it is chiefly confined to the Severn valley, penetrating into the borders of Denbigh, Montgomery and Flint. A few pairs have bred in Cheshire, and the southern half of Staffordshire, and the low ground of South Derbyshire are annually visited by a few birds. In Notts it also breeds locally, and reaches its northern limit in Yorkshire, avoiding the Pennines, the Cleveland Hills, and the Wolds. The reported instances of breeding in Lancashire are open to much doubt, and the isolated instances of supposed breeding in Northumberland in the north, and Cardigan and Carmarthen in the west are, if correct, quite exceptional. It is unknown in Scotland and Ireland. [F. C. R. J.]

3. Migration.—A summer visitor to its British breeding range, and a mere straggler to any other parts of our area in which it occurs at all. The nightingale arrives “along the whole south coast, but first and chiefly on the eastern half.” Only a few stragglers have arrived before mid-April, when the first big “wave” reaches our shores. Other waves follow, and the birds spread inland. The whole movement may be practically over by the end of the month, or may drag on well into May. The males appear fully a fortnight before the females. The emigration season lasts from mid-August to mid-September. The small area from which all the members of the species participating in the British movements are drawn, is probably chiefly responsible for the shortness of the periods over which these movements extend. The species travel singly or in small parties. (Cf. *B. O. C. Migration Reports*, i. pp. 31-33; ii. pp. 46-49; iii. pp. 54-57, and pp. 61-64; and Ticehurst, *B. of Kent*, 1909, pp. 32-33.) [A. L. T.]

4. Nest and Eggs.—The nest is generally close to or on the ground in woods or hedge bottoms, often close to a roadside and not far from water, but occasionally as much as 3 or even 5 feet high. The foundation consists of a profusion of dead leaves, chiefly oak, but sometimes also beech, and coarse bents, while the interior is lined with finer grasses and sometimes a few hairs or small dead leaves. (Pl. xvii.) The cock has been seen to share in the work of construction (W. Farren, *in litt.*). Eggs 4 to 6, generally 5, in number, uniform olive-brown, shading to greenish. Some clutches show distinct fine brown mottling tending to form a cap on a blue-green ground: others are a beautiful blue without marking. Average of 100 eggs, $\cdot 81 \times \cdot 61$ in. [$20\cdot 6 \times 15\cdot 5$ mm.]. The breeding season begins early in May, but fresh eggs may be found till late in the month. Incubation lasts about 14 days, and is, according to Naumann, performed by both sexes, chiefly no doubt by the hen. Bailly asserts that it is performed by the hen alone. One brood is reared in the season. [F. C. R. J.]

5. **Food.**—Worms, insects, berries. The young are fed, according to Macgillivray at first with macerated substances for 8 or 10 days, after which they receive insects and worms. Both parents share in the task. [F. B. K.]

6. **Song Period.**—From shortly after the time of their arrival to the date when the young are hatched, generally about the beginning of June, but the song has been heard as late as July 10 (*Field*, 1897, vol. lxxxix. p. 884). The young of the year, like young robins, utter a low warbling note, which, according to Naumann, serves to distinguish the cocks from the hens at this stage. [F. B. K.]

The following species and sub-species of the Turdinæ are described in the supplementary chapter on "Rare Birds." The occurrence of the forms whose names appear in square brackets is doubtful:—

Dusky-thrush, *Turdus dubius* Bechstein.

Blackthroated-thrush, *Turdus atrogularis* Temminck.

White's thrush, *Turdus aureus* Holandre.

Siberian-thrush, *Turdus Sibiricus* Pallas.

[American-robin, *Turdus migratorius* Linnæus.]

Isabelline-wheatear, *Saxicola isabellina* Cretzschmar.

African desert-wheatear, *Saxicola deserti deserti* Temminck.

Asiatic desert-wheatear, *Saxicola deserti albifrons* Brandt.

Eastern russet-wheatear,	} <i>Saxicola hispanica</i> ,	{ <i>xanthomelæna</i> , Hemprich and Ehrenberg. <i>hispanica</i> (Linnæus).
Western russet-wheatear,		

(*N.B.*—This species includes both black-throated and black-eared forms which have until recently been supposed to be two distinct species. They are, however, now believed to be dimorphic forms of one species.)

Pied-wheatear, *Saxicola pleschanka* (Lepechin).

Black-wheatear, *Saxicola leucurus* Gmelin.

Siberian-stonechat, *Pratincola torquata maura* (Pallas).

Whitespotted-bluethroat, *Cyanecula svecica cyanecula* (Wolf).

[Northern-nightingale, *Luscinia luscinia* (Linnæus).]

THE THRUSH GENUS

[F. B. KIRKMAN]

I

The Thrush¹ genus gives its name not only to the Sub-Family (*Turdinæ*), but to the whole of the great family to which it belongs (*Turdidæ*). The genus itself is found distributed over the larger part of the globe, from Japan to California, from Iceland to Cape Colony, and in every climate from equatorial to arctic. It has in its ranks songsters of the first order, pre-eminent among them being our song-thrush. Though most of its species are of relatively sober hue, there are not a few that can claim to be brightly coloured, for to the prevailing greys, browns, or blacks they add fine hues of red, such as may be seen on the flanks of the redwing or the breast of the American-robin (*T. migratorius*), a bird of the size of the fieldfare, resembling our robin only in the colour of its breast, and in those characters which are common to the Sub-Family (*Turdinæ*) to which both belong.

Of the two hundred or so known species the names of eleven only appear on the list of British Birds.² Of these two are of doubtful occurrence, and three others but rare and occasional visitors.³ The remaining six form the subject of this section. Three, the song-thrush, blackbird, and mistle-thrush, are resident species; one, the ring-ouzel, is chiefly known as a summer visitor; and two, the fieldfare and redwing, come to us only for the autumn and winter.⁴ Four have spotted plumage of the type of the mistle-thrush, and two, the blackbird and ring-ouzel, are black in the male sex, the black in the case of the ring-

¹ When the term "Thrush" (with a capital T) is used in this chapter, it refers to the *genus*; the term "thrush" being used as synonymous with song-thrush.

² The genera *Merula* and *Geocichla* are here merged into *Turdus*.

³ See the list at the end of the "Classified Notes."

⁴ The term "resident" means that individuals of the species are to be found in our Isles all the year. Some are stationary, others are migrants. See the "Classified Notes."

Plate 34

Mistle-thrushes (left) and fieldfare (right)

By A. W. Seaby



ouzel being relieved by the white crescent on the breast. The females of both the latter species are more or less dusky brown. The young of the whole genus, and indeed of the whole sub-family (*Turdinæ*) are spotted, a fact which is held to be one of the proofs of the common ancestry of the group.

In their feeding habits, outside the breeding season, our six common British Thrushes are much alike except with respect to the extent of their gregariousness. Fieldfares and redwings seldom feed except in company. The mistle-thrush may be seen feeding in families, and later in the season both in flocks and pairs, a peculiarity to which we shall revert. Neither the song-thrush nor the black-bird can be said to feed gregariously, except when pausing to rest during their migratory movements. Several of either or both species may sometimes be seen in more or less close proximity, but these are merely temporary aggregations due to the presence of a number of individuals on a common feeding-ground. They are broken up as soon as the birds take flight, each individual then making off without paying any attention to the course followed by the others. The same, no doubt, applies to the blackbirds which, in the berry season, have been noted congregating in the hedge-rows.¹

A weakness for berries is common to all our Thrushes, not excluding the ring-ouzel, which will linger on the east coast for days before departing to its continental winter-quarters in order to eat haws and the acid fruit of the sea-buckthorn.² These berry-feasts by no means tend to promote harmonious relations between the several species, a fact well illustrated by Mr. Seaby's drawing of the mistle-thrush (Pl. 34), which shows one of this species debating the law of property with a fieldfare and getting the best of it. The usual method of eating is to pluck off the berry, which, after being held stationary for a moment between the mandibles, is swallowed whole. An inspection of the ground near trees—hawthorns, yew, mountain-ash and others—on which thrushes have been feeding will reveal the fact not only that

¹ Warde Fowler, *A Year with the Birds*, 1886, p. 19.

² Nelson, *Birds of Yorkshire*.

they regurgitate the seeds and skins in the form of pellets, but that the latter are frequently composed for the most part of the soft pulp of the berries in a state showing that digestion had hardly begun before ejection took place. The inference is that the birds were eating for the sake of eating, and that after each meal they promptly made room for the next. Mistle-thrushes have indeed been caught in the act by Mr. W. H. Hudson, who saw them, after devouring yew berries, fly down to a nice spot of green turf, disgorge, and then return to gorge again. He discovered one casting made up of twenty-three whole berries.¹

To its partiality for mistletoe berries the last-named species owes its name. In devouring the fruit, the bird, in common no doubt with many of its congeners, does the plant a service by disseminating the seeds. As to how it does this there is some difference of opinion. Post-mortem examinations make it clear that very few seeds pass into the bird's intestines.² They are generally, as already noted, regurgitated; consequently they can rarely be deposited on boughs after passage through the body. Nor, if the berries are swallowed whole, would one imagine that any seeds could be left on the branches on which the bird wipes its beak? But Sterland writes as if he had seen this take place: 'The berries are exceedingly viscid, and the seeds frequently cling tenaciously to the bill of the bird, who, to rid itself of them, is compelled to rub its bill on the boughs of trees.'³ Regurgitated pellets may, and doubtless do, occasionally fall on to the branches of various trees, and any seed they contained would be glued to the wood by the viscous pulp in which it is embedded. The fact that the mistletoe is usually found growing on the sides, and not the tops of the boughs has been explained by the semi-fluid nature of the matter deposited. It tends to flow, and being very ductile and cohesive, may sometimes be seen hanging from the boughs in strands some inches in length.

¹ W. H. Hudson, *Nature in Downland*, p. 229.

² Macgillivray, *Hist. of British Birds*, vol. ii.

³ Sterland, *Birds of Sherwood Forest*, p. 54.

Our Thrushes find by far the greater part of their food upon the ground. There is no more familiar sight than the song-thrush, when thus engaged, standing on the lawn, erect, its spotted breast conspicuous, its attitude all attention. It suddenly makes a short run, bends forward, head on one side as shown in Plate 35, and, if its investigation proves satisfactory, pounces upon its prey with a quaint little jump, drags it out of the ground, and swallows it at one gulp. It does not, of course, behave each time in exactly the same way; it does not, for instance, always run between the pauses; it may hop, or it may run and hop, and it may indeed adopt all three methods after consecutive pauses, quite regardless of the ornithologist's dislike of the unsystematic. But the end and the beginning are always the same—the erect, attentive attitude, and the final assault.

If the bird succeeds in hauling out a long worm too large to swallow whole, its general practice is to cut it up by pecking. The process takes some time, and I have seen a thrush relieve the tedium by taking a few impatient hops about, carrying, for the sake of company, a section of the worm in its bill, after which it laid it down upon the grass, wiped its beak, and again set to work. Smaller worms are either instantly swallowed, or, if intended for the young, coiled round the beak, or folded between the mandibles, without, however, too much regard for appearances, a loose end or two being allowed to dangle with a careless and agile grace. A second, a third, and possibly more, with an insect or two, are added, the additions being often made without disturbing the worms already in position. With its beak thus agreeably festooned and fringed the bird flies off, and, if it be the cock, alights perhaps before reaching the nest, to sing a snatch or two, its voice being but little incommoded by the victims it thus compels to listen to their funeral march, before it bears them living to their living tombs.

Occasionally I have noted a thrush pull up a worm and leave it lying. In one instance, a second thrush on seeing the discarded worm, ran up, seized, and bore it off. Thereupon the first, moved

perhaps by some vague proprietary instinct, turned suddenly and followed it with querulous notes, which, of course, received no attention.

When the thrush pauses, erect and attentive, it appears to be listening. No doubt a slight rustle in the grass would attract its attention, for its hearing powers are highly developed. But it probably depends mainly upon sight, the slightest movement, whether of an insect, or of a worm emerging ever so little aboveground, immediately catching one or other of its eyes, which are so placed in the head as to command nearly all the ground immediately around. The pauses themselves have presumably no other object than to give sufficient time for close inspection.

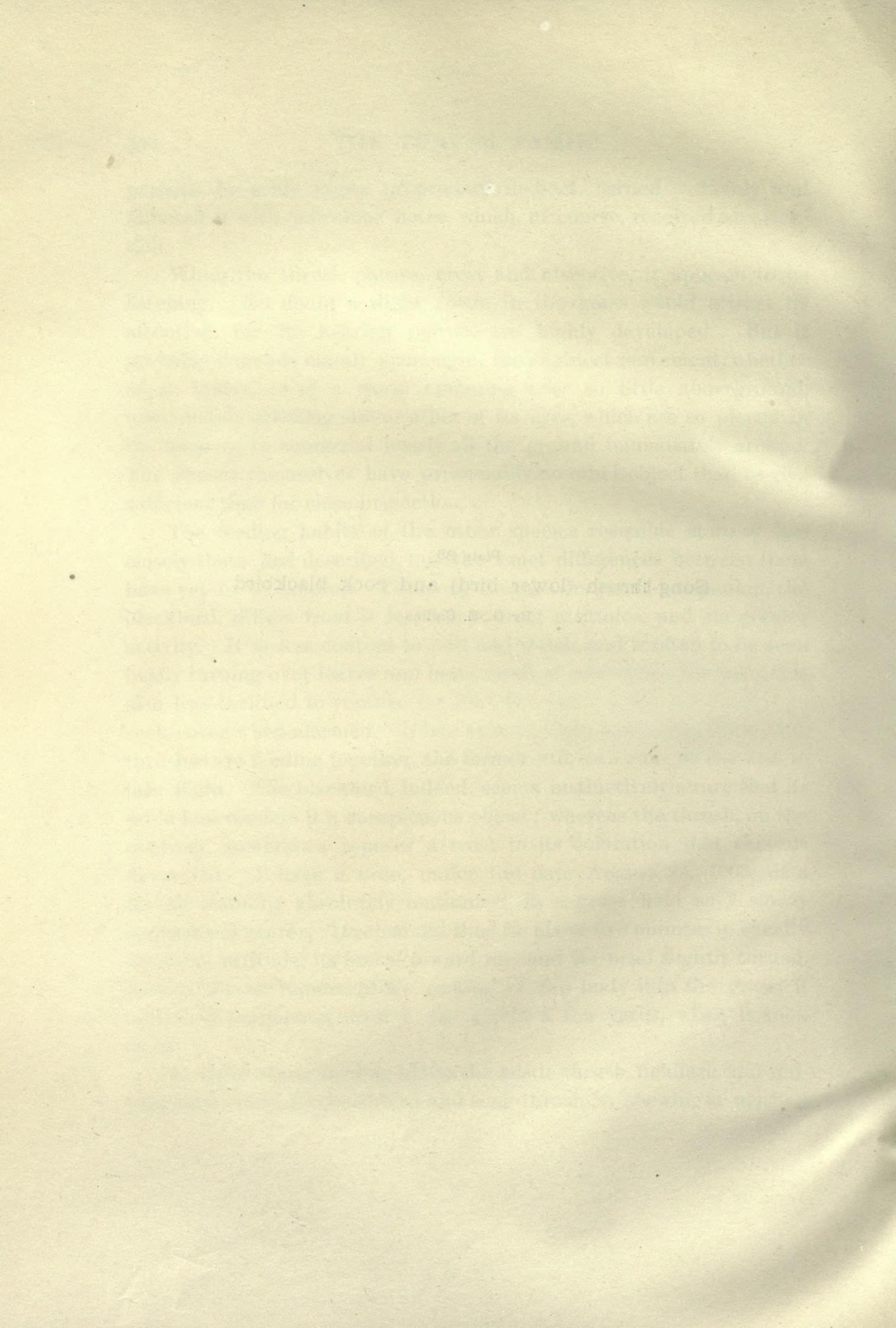
The feeding habits of the other species resemble more or less closely those just described, but the exact differences between them have yet to be studied. The song-thrush's frequent companion, the blackbird, differs from it in its less erect attitudes, and its greater activity. It is less content to wait and watch, and is often to be seen busily turning over leaves and loose earth or scratching the soil; it is also less inclined to venture far into the open, and more prompt to seek cover when alarmed. If one enters a field where blackbirds and thrushes are feeding together, the former will, as a rule, be the first to take flight. The blackbird, indeed, seems instinctively aware that its sable hue renders it a conspicuous object; whereas the thrush, on the contrary, sometimes reposes a trust in its coloration that exceeds discretion. I have a note, under the date August 24, 1903, of a thrush standing absolutely motionless in a grass field as I slowly approached nearer. It remained thus for about five minutes in exactly the same attitude, its breast toward me, and its head slightly turned. Except for an imperceptible sinking of the body into the grass, it remained motionless until I was within a few yards, when it took flight.

In their winter feeding habits the mistle-thrush, fieldfare, and red-wing differ from the blackbird and song-thrush in showing a marked

Plate 35

Song-thrush (lower bird) and cock blackbird

By G. E. Collins





preference for the open country, and for a more or less nomadic existence. When on the ground, the redwing feeds much like the song-thrush, but, as far as my observation goes, has not the latter's characteristic upright pose. Though this pose is assumed both by the fieldfare and mistle-thrush, it is so with a difference that finds expression in their wilder, freer, and bolder air. The following general description by Macgillivray of the fieldfare's ground habits applies almost equally to the mistle-thrush, the two species sometimes indeed feeding in company. After circling a little the flock will settle on the ground, and "each is seen to stand still with its wings closed, but a little drooping, its tail slightly declined, and its head elevated. It then hops rapidly a few steps forward, stops, picks up a seed, an insect, or other article of food, and again proceeds. They generally move in the same direction, always facing the wind, if it be high, and those in the rear, especially if left far behind, fly up to the front. When alarmed, they all stand still for a short time, some mutter a low scream, and presently all fly off to a distance, or alight on the tall trees in the neighbourhood." There they may be seen in statuesque attitudes, uttering the familiar *tchack! tchack! tchack!*¹

The song-thrush's method of breaking open snail-shells in order to feast on the unhappy molluscs within is well known and, by the gardening fraternity, well appreciated. The bird seizes between its mandibles the margin of the circular doorway to the snail's house, and flying to some favourite stone or rock, its "anvil," proceeds to hammer the shell upon it until broken in fragments, the "tap, taps" being audible at some distance to those who have ears to hear. The anvil is easily recognised by the broken fragments about it, relics of many a feast, joyous or melancholy, according to the bent of one's sympathies. The blackbird and the redwing will also break open snail-shells, the latter sometimes, instead of beating them on stones, simply cracking them, presumably the smaller kinds, with blows of its

¹ Macgillivray, *History of Birds*, vol. ii. For the attitudes of the fieldfare on the ground see Plate 36, by A. W. Seaby.

beak on the thinner or spiral end.¹ I have not seen the fieldfare, mistle-thrush, or ring-ouzel attacking snail-shells, and can find no evidence on the point.

In hot weather the blackbird has been known on more than one occasion to turn fisher. The method it adopted was to make a dash into the shallow water at the edge of a stream, snap up a minnow, land it, and, after pecking its lively victim into a convenient state of tranquillity, swallow it whole. That the blackbird should alone have been recorded as making this departure from the customs of its Family is not surprising, for it is an enterprising bird. The mistle-thrush has been accused of a more serious departure from Family traditions; that is, of taking the young of other species either for its own consumption or to feed its young, and there is reason to believe that the charge is true. It may be urged in extenuation that the evidence shows the offender was pushed to these extremities by a period of drought.²

In hard weather, when the soil is sealed with ice or covered with snow, the Thrushes suffer severely from hunger unless there are berries still to be found. Many of the migrant birds move further south or west, some crossing to Ireland. Several go still further, and leave our Isles for warmer climes on the Continent. This applies not only to the redwings and fieldfares, but also to those song-thrushes, blackbirds and mistle-thrushes that have come from N.-W. Europe in the autumn to winter with us. The stationary members of these species, those that are seen about our gardens throughout the year probably remain where they are, or if in early autumn they have gone to the uplands for berries, come down to the valleys and also to the coast, where fieldfares and redwings, and even mistle-thrushes also resort to feed on shell-fish or whatever else they can pick up.³

¹ Macgillivray's *History of Birds*, vol. ii.

² For the blackbird as fisher, see H. E. Forrest, *Fauna of North Wales*; *Field*, 1894, vol. 84, p. 47. For the mistle-thrush, see the *Zoologist*, 1887, pp. 263, 304.

³ *British Association Reports* on the "Song-thrush" (1900, pp. 404-409), and "Fieldfare" (1920, pp. 374-7), both by Mr. Eagle Clarke; J. Cordcaux, *Birds of the Humber District*; D'Urban and Matthew, *Birds of Devonshire*; N. F. Ticehurst, *Birds of Kent*; Nelson, *Birds of Yorkshire*.

During a protracted spell of cold hundreds, and sometimes thousands, perish. According to most observers the redwing is the first to succumb. This has been said to be due to its repugnance to a berry diet, but I have seen it during a spell of snow devouring haws with every sign of finding them much to its taste. The bushes were full of these birds, their soft liquid *twip! twip!* coming from all sides, the birds being hidden, except when now and again little flocks rose with a rush, their red flanks flashing as they flew away in scattered flight to descend again with graceful halting sweeps, as if about to alight in mid-air, on an unseen perch, but deciding not, so up again and down, till their feet clasped solid wood.¹

It has further been suggested that a fruit diet does not agree with them, instances having occurred of birds found dead with their gullets full of berries.² But death may have in these been due to other causes. Moreover the question of whether or not this species thrives on berries becomes irrelevant when, in the case of late frosts, few or none remain to be eaten. Under such circumstances redwings behave much as do the fieldfares, and are possibly more enterprising. In the winter of 1878, when thousands perished, they were seen in the busy streets of Leeds and other towns searching for their food with the sparrows.³ Like the fieldfares they resort in numbers to the coast, but unlike them do not, judging from the lack of evidence, have recourse to the Swedish-turnip fields. The fieldfare appears to be the only one of our Thrushes who is able to bring himself, when in reduced circumstances, down to such a diet, and it is in no pleasant mood that he faces his meal. It is at once a banquet and a battle, a dozen pairs at a time rising to fight above the heads of the flock, third parties

For the mistle-thrush resorting to the coast see G. Sim's, *Fauna of Dee* (Scotland). I can find no direct evidence of the blackbird doing so, but that it knows its way there is clear from the fact that, in Ayrshire, in late summer, numbers have been found on the shore, sheltering from the heat under blocks of stone (Gray, *W. of Scotland*). That the remaining species seek the shore in cold weather is common knowledge.

¹ The redwing has been observed to feed on the berries of the hawthorn, blackberry, juniper, ivy, holly, burberry, mountain-ash, and rarely the sloe (N. Wood, *British Song-Birds*, 1836, p. 26).

² H. E. Forrest, *Fauna of North Wales*.

³ T. H. Nelson, *Birds of Yorkshire*.

often seizing the occasion to make malicious assaults upon the nearest combatant within their reach, only to find themselves engaged in duels on their account, the original opponents of the birds they attacked having profited by the diversion to return to their turnips. The stomachs of birds shot when thus feeding have been found full of the pulped Swede, so that there could be no doubt left as to the nature of their business.¹ Fieldfares have also been observed by Dr. Saxby scraping away the snow "with their bills" in order to search for food among the decaying twigs and leaves. Naumann states that, while scratching among the leaves is a regular habit of the redwing, it is only resorted to by the fieldfare under pressure in hard weather. If this be exact, it may be assumed that the redwing does not neglect the habit in time of stress, and that, raids on turnips apart, he enjoys the same chances of survival as the fieldfare. With the evidence such as it is, one may be excused for not expressing any opinion as to why redwings succumb more readily than their congeners in frost and snow. It may be added that at least one good authority, Mr. Cordeaux, did not admit the fact, his view being that fieldfares suffer most.²

The semi-domesticated blackbirds and thrushes, having the resources of civilisation at their disposal, suffer no doubt less in hard weather than their shyer congeners, including among the latter the mistle-thrush, who enjoys one marked advantage, however, in the struggle for life, and that is the strength to drive other species from the bush on which he is feeding. The blackbird seems to suffer least of all, and this may be due to his habit of skulking and scratching under thick bushes. When the song-thrush had abandoned hope, and the fieldfares stood listless on the trees, their feathers puffed out, their wild spirits so tamed that they allowed me to come near enough to

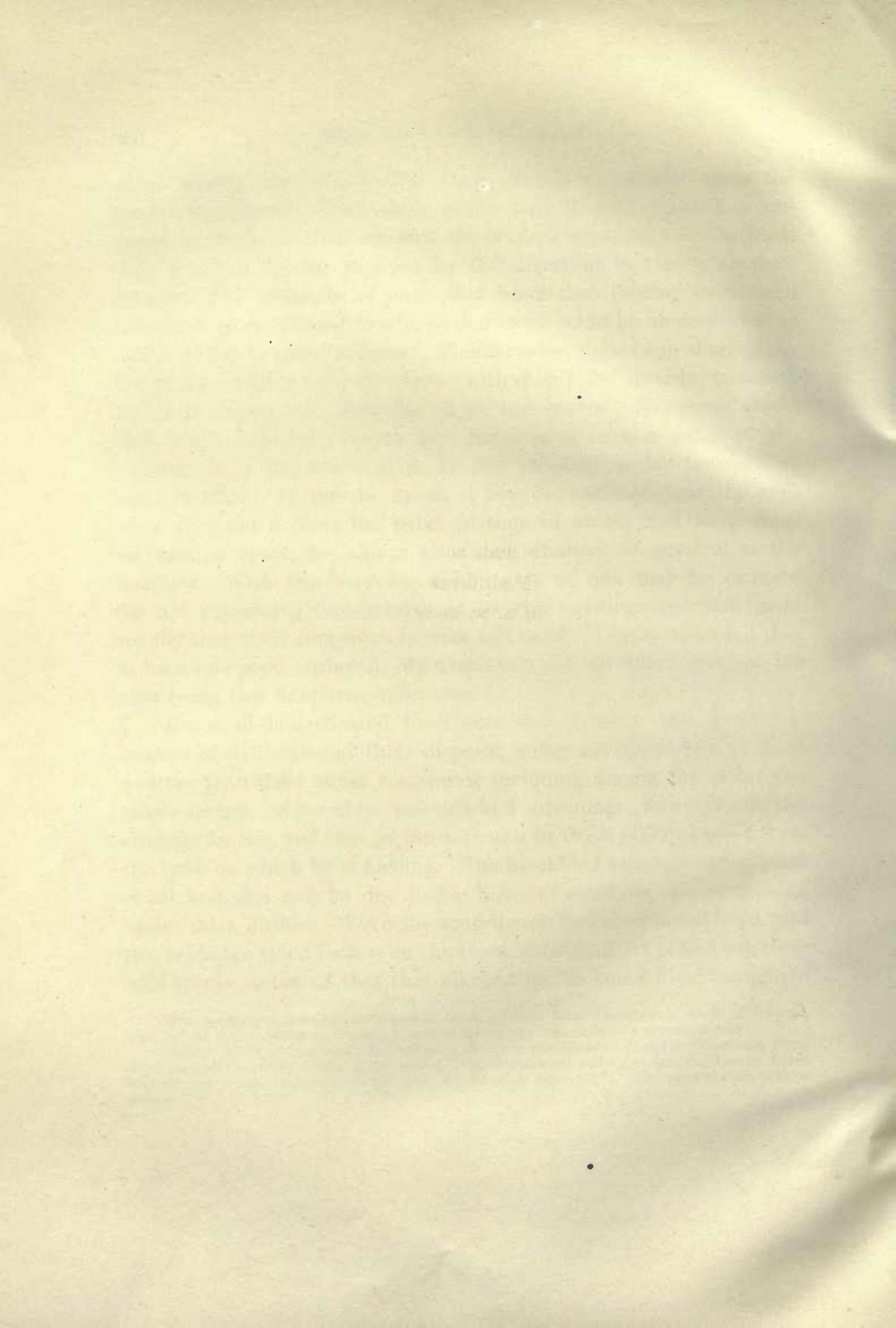
¹ This account of the fieldfare's turnip feast is taken from Thompson's *Birds of Ireland*. The fact of their feeding on Swedes in cold weather has been noted by several writers.

² Saxby, *Birds of Shetland*; J. Cordeaux, *Birds of the Humber District*; Naumann, *Vögel Mitteleuropas*, i. Since writing the above, I have observed redwings feeding among fallen leaves; they tossed them aside with their beaks as do blackbirds. The song-thrush seldom does so.

Plate 36

Fieldfares

By A. W. Seaby





admire the delicate pencilled markings on their flanks, I have noted the blackbird still hard at work, scratching the soil and tossing aside the leaves with feverish energy and unabated hope in the dusky recesses beneath thick sheltering hawthorns.¹

One has indeed only to see and hear the bonny "ouzel-cock" to feel he has good store of superfluous vitality. He puts the maximum of energy into all he does. Listen to him as, suddenly quitting his retreat, he whisks his black shape into view, outraging the quiet of your garden, with his noisy rattle, uttered sometimes for no apparent reason, unless it be to release his pent up spirits, or else to enjoy the momentary alarm he causes his sedater relatives the thrushes as they stand statuesque upon the lawn. Watch him on alighting swing up the handsome tail so that, for a moment, it shows against its background like a mark of exclamation. Keep watching him, as he pauses alert, suspicious, not pleased with you, with your ways, or with your garden, and you may see him, with flicks and jerks of wing and tail, and "minks" and "tchuks," pass from indignant interrogation to more indignant expostulation, and thence to most indignant condemnation, till suddenly off he goes, jerking indignation from his tail:—"Others may put up with that sort of thing, but not he! No indeed!!" Again who so noisy in our garden as the blackbird when he "minks" and "tchuks" and "weet-a-weets" his way to bed! From his attitude towards this familiar function, one might imagine he performed it under protest, that he regarded sleep as a base stratagem invented by Providence to curtail each day the legitimate expression of his feelings.

All our Thrushes, like birds in general, are more or less vocal, and sometimes harmonious, before going to sleep. They roost in trees, bushes, or creepers. The fieldfare sleeps often on the ground among stubble, grass, or heath, a fact noted long ago by Gilbert White, who,

¹ In this connection the following extract from Couch's *Illustrations of Instinct* (p. 116) is interesting: "When in past years I have been engaged in taking birds with a hook and line, I have observed that the thrush and redwing would endeavour to disengage the bait by running to the end of the cord, and there pulling at it with all their might, but that the blackbird would rub the bait on the ground with its feet as the hen digs for food."

in order to leave no doubt on the point, stated that these birds were frequently caught in the wheat-stubbles by larkers, when dragging their nets by night.¹ That they are found roosting on trees was put beyond question by a more modern ornithologist, who adopted the amiable expedient of issuing forth one night with a lantern and knocking some off their perches with a stick. His view was that this species only roost off the ground when driven to do so by snow or storm, a statement that should not be difficult to verify.² In Ireland fieldfares have been seen roosting on a bog whither they came each evening in small flocks from the surrounding country, wheeling, descending, and rising before finally alighting to sleep—behaving, in short, very much like starlings.³ The immigrant blackbirds, and no doubt also the song-thrushes, which arrive on our east coast in autumn, may be seen roosting in flocks. One envies Mr. Cordeaux who, one evening, witnessed 135 blackbirds enter a two-acre plantation of young spruces. The figure given did not represent the total number, as he was only able to watch one side of the roost. The sight of three or four hundred blackbirds lifting up their united voices against the indignity of being obliged to go to bed must have been as entertaining as a chapter of Dickens.⁴

II

As winter passes into the spring there comes to the fieldfares and redwings, and also to the migrant thrushes and blackbirds, a far call from their northern homeland. Obedient to it, they gradually collect into large flocks, and make ever steadily eastward and northward to the coast. Their numbers are soon increased by those of their kin that have wintered south of the English Channel, who, obeying the same imperative summons, pass, with halts by the way, through our eastern counties, bound for the same destination. Now, as in the

¹ Letter to Pennant, February 22, 1770.

² *Field*, 1861, vol. xvii. p. 35.

³ *Irish Naturalist*, 1907, p. 162 (W. J. Williams).

⁴ *Birds of the Humber District*.

early autumn, it is that we see appearing in our fields and parks and gardens the familiar flocks of song-thrushes and other species—that are here to-day and, after a hasty meal, are gone to-morrow. All these birds, in their thousands, fieldfares and redwings, thrushes and blackbirds, winter visitors or birds of passage, keep pressing onward to the coast, where in a state of restless expectation they await the final irresistible impulse that, day after day, is to drive them, flock after flock, across the North Sea to the shores of Norway and Sweden. The journey once begun there can be no lingering by the way, no repose for tired wings, no rest for the soles of their feet. Unlike the dove that issued from Noah's Ark, they cannot return whence they came; the summons draws them relentlessly onward, guiding their course over the trackless waters, till they sink exhausted on the coasts of the land of their birth.¹

Long before the last of these emigrating birds have disappeared from our coast, the thrushes and blackbirds that rest with us throughout the year are in the thick of their nesting activities, their numbers having been considerably increased by new-comers from across the English Channel, who arrive on the south coast of England and Ireland during February and March, staying to breed, and returning in the autumn to their winter quarters on the Continent.²

It will have been noted that there is in the case of our blackbirds and thrushes two entirely distinct migrations; that of the Scandinavian birds which come south to winter with us, going back in the spring, and that of the birds from Western Europe, which come north to breed with us, going back in the autumn. Consequently many of the birds we see nesting in our hedge-rows in the summer are, in winter, far away in the sunnier South, their places being taken by the Northern invaders. Such are the facts that have been established by the records kept at the light stations on our coasts, both of birds seen flying by day and of those less happy ones that, speeding hot-winged

¹ See the works quoted in footnote 3 on p. 354. The resident mistle-thrushes also receive a slight accession to their numbers in the spring. See the "Classified Notes." ² *Ibid.*

through the night, are lured to destruction by the blinding glare of the mighty lamps, against which they dash to fall and perish, just when their long toil is coming to an end.

While the great inward and outward spring migration of Thrushes is taking place, there appear on our shores flocks of another member of the genus, the ring-ouzel, first the young birds of both sexes and the old hens, then later the old cocks, bearing on their breasts the broad white crescent, emblem of their race.¹ These flocks gradually break up, and dispersing in pairs over the hills and moorlands, seek preferably a spot where some rugged boulder gives them a watch-tower, and possibly a site for the nest. But the site cannot be chosen until the formalities of the courtship have been exactly and diligently complied with, as enjoined by the unwritten conventions proper to each species. Unfortunately so little has been recorded about the sexual displays of the Thrushes, common though some of them are, that it is impossible to institute a satisfactory comparison. Of the ring-ouzel's courtship we have the following interesting account from the pen of Mr. J. M. Boraston: "My attention was called to the two birds as they were going through their strange antics on a small grass bank on the hillside. The female would advance a few inches with head erect, upon which the cock, with head equally erect and facing the same way, would follow, stopping close to, and almost abreast of, the female, as if in position to whisper in her ear. Then the female would advance a few inches further, and the cock follow again in the same manner. In this way they paraded up and down the bank, along and across it, the cock emitting throughout a subdued, twittering song, to which the hen appeared to listen with becoming circumspection. At times the male bird would hop quickly in advance of her, swing round, and face her from a distance of a foot or two, continuing to utter his excited serenade the while. Then, crouching, he would suddenly fly at her, but she, with feminine foresight, flew to the right as he came by the left, the result of the double movement

¹ Nelson, *Birds of Yorkshire*. See also "Classified Notes" under *Migration*.

Plate 37

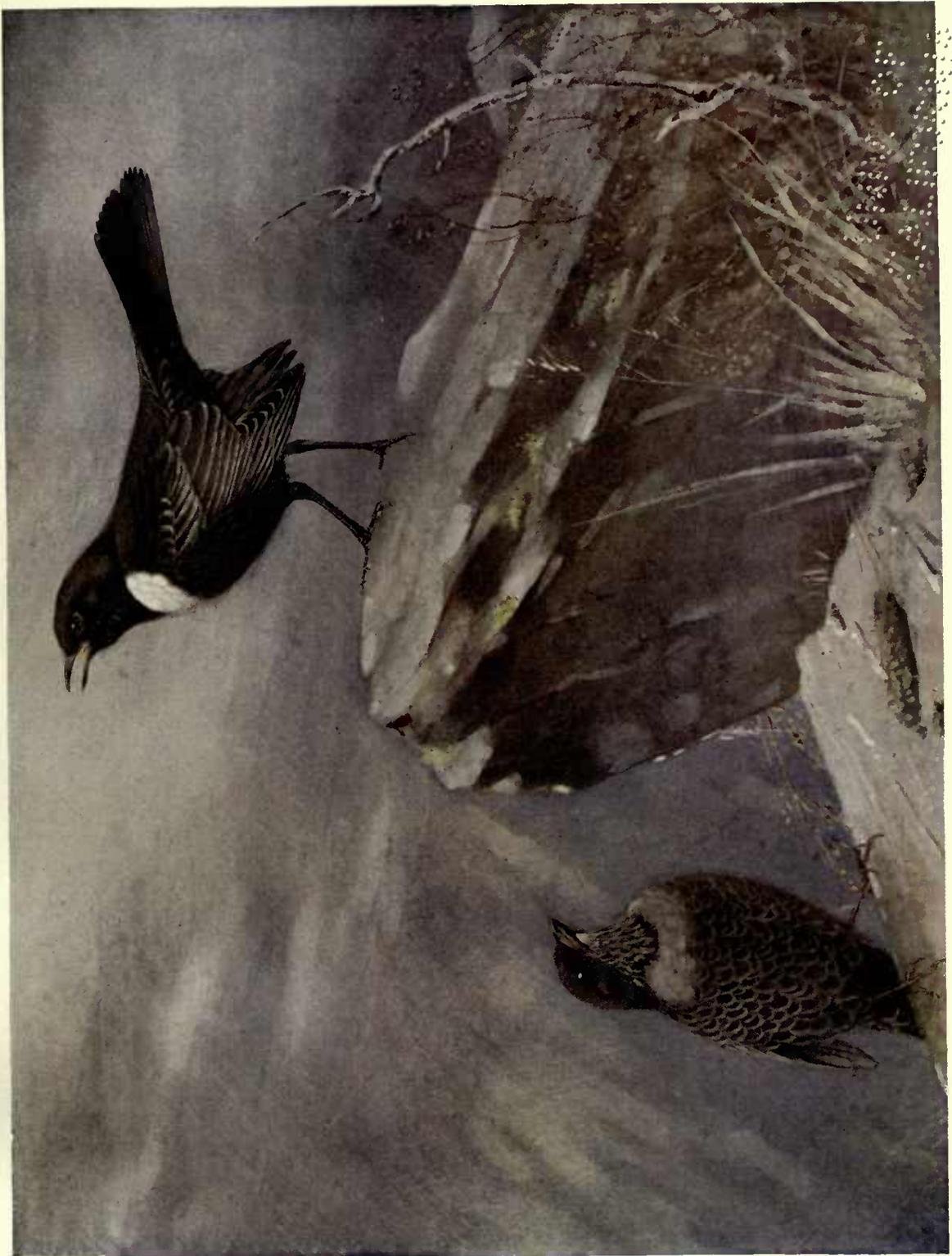
Ring-ouzel singing to his mate

By A. W. Seaby

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THE
MIND-CONTROL MANGING TO HIS TASTE
BY A. W. [illegible]

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being that they had merely changed places without touching one another. At times they would flutter up together a short way from the ground, only to drop again and resume the endless strutting and twittering, the sudden volte-faces and cross-flights, until in the end the lady gathered herself up, and made off for the higher slope, the male in hot pursuit; and when we last saw them, he was plying her with a torrent of excited twitterings, meant to assure her, no doubt, of his eternal devotion until the autumn equinox, by which time the ring-ouzels have abandoned the domestic state, and packed for migration, leaving the reshuffling of the matrimonial cards until their return in the following spring.”¹

The display of the cock blackbird is an equally remarkable performance. Mr. Boraston was fortunate enough to see one crawling slowly through the grass, the body low, the neck and head extended stiffly forward, the long black tail fanned to the full, depressed, trailing, while from the partly opened beak issued a continuous subdued outpouring of ecstatic squeals and pipings. Two hens regarded these preliminaries with interest, as if fascinated. When close in front of them, the cock stopped suddenly, as suddenly drew himself up, flung his tail round to one side, stretched his neck and head away to the other side, and stood thus rigid, as if stuffed, wearing, one may well believe, that look of pathetic imbecility which seems common to the males of all vertebrates, including man, when posing before the other sex; and which is forgiven them only because, though inartistic, it is an unmistakable manifestation of ardour and devotion.

The presence of the two hens would have made the subsequent proceedings uncommonly interesting, but one of them happened to have eyes for more than the strange figure before her; she caught sight of the onlooker, and flew off, followed by the second hen,

¹ *Birds of Land and Sea*, pp. 115-117. The ring-ouzels begin to gather into small flocks in July, gradually descending to the lower grounds as August passes into September, where they sometimes visit the gardens. They finally reach the east coast, and linger till October, or later before actually departing.

and also by the cock as soon as he had collapsed into his normal attitude.¹

That in this display the cock should fling his head to one side and his tail to the other might be explained by his desire to show off the magnificence of the latter, but why did he not fling it up, erect, as is his frequent habit, when alighting? Perhaps he felt that the occasion merited something more original. A still more original feature of his display, absent from the one just described, is the erection of the upper tail-coverts, which are made to stand up almost like a small forest of bristles on the lower part of the back. This was witnessed by Mr. Seaby in the case of a cock engaged in running on the ground towards a hen in an attitude similar to that of the bird observed by Mr. Boraston; and again by myself in the case of another cock who alighted on a wall, by himself, and ran along it with the tail slightly spread and depressed, but in an evident state of excitement. There was no hen nearer than forty yards.

These displays are, of course, not confined to the period of courtship; for the emotional state that gives rise to them continues to reassert itself after mating. In the early hours of an April morning I have seen a cock blackbird uttering his familiar *mink! mink!* but in soft and chastened tones, and at intervals fanning and trailing his tail, all in a vain effort to win some sympathy from his mate. She, being more profitably engaged in winning the bashful worm, suddenly lost patience, and drove him from her sight.

The mistle-thrush and song-thrush have no doubt a courtship display, but no account of it has yet been published. Beyond the fact that the cock thrush has been seen to puff out his feathers when stirred by love, all that can with any certainty at present be said is that couples of either species may be seen early in the year, often in some wide field, tacking hither and thither, displaying at every halt the spotted splendour of their breasts, a protracted and somewhat wearisome performance, unless enlivened by the advent of a rival male,

¹ *Nature Tones and Undertones*, p. 131.

martially erect, flicking the tail of scorn, and sounding notes of battle. The attitude of song-thrushes about to engage is a familiar sight in the spring. Their heads lowered and stretched aggressively forward, their tails bent downward, they stand ready to spring up and close, and are, it must be added, prepared to stand thus for long before actually striking a blow. There is no fiery haste to win the fair one; but there is much chasing and counter-chasing, with intervals for song, and also for refreshment. The fights may be varied by outbursts of song, and a mistle-thrush has been seen to suddenly utter a pæan of triumph when in full flight after a routed rival.

The duels, like the sexual displays, continue for some time after the birds are paired and the eggs are in the nest. The latest note I have of such an encounter is dated April 30, that is, at the time when young are already in the nest. The combatants were two thrushes, who had been fighting before I came up, continued fighting for the quarter of an hour I watched them, and were still at it when I left. They fought in the air, rising from the ground or from a branch, apparently striking with claws and wings, snapping their mandibles, and uttering a rapid excited *ptik!* less "clinking" than a similar note uttered by two blackbirds who followed the duel with keen attention; exemplifying what has been frequently observed—the interest taken by one species in the disputes of another.

There is more than one way of accounting for these hostilities. The first is that one cock resents, or chooses occasionally to resent, according to his mood, the approach of any other cock, near his mate. This other may or may not be a paired bird, for no doubt there are individuals which, for one cause or another, do not breed. That they are ready to do so is shown by the ease with which survivors of a pair are able to find a new mate.¹ The second is that each pair lays claim to a certain area of ground in the neighbour-

¹ See p. 56, above.

hood of its nest, and seeks to drive out all trespassers of its own species. If by this is meant merely that a pair will object to too near an approach to its nest, then it is generally true. Not only will the pair, especially the cock, drive away members of its own species, but of any other species, and this will undoubtedly occur even before the nest is completed. If, on the other hand, it means that the pair has a definite feeding area within which, during the breeding season, it habitually remains, then, though obviously true of certain species, *e.g.* the chiff-chaff, it is not, or is only partially, true of blackbirds and thrushes, who must often have to go outside any imaginable private domain for their food, and who may be seen seeking it on the same grass patch as others of their species. In this they resemble, for instance, the starlings, who will fly a quarter of a mile or more away from the nest when in search of supplies for their young, and who frequently alight close to other pairs similarly engaged, so that, at times, the united couples have almost the appearance of a flock. Further, as far as my observation goes, there is little fighting among thrushes after the end of April, that is, just at the time when the birds would be tempted to go outside their own domains, if they had any, in order to satisfy the increasing demand of the young for food.

The statement that the end of April puts a term to hostilities is corroborated by an account of an unusual duel given in the *Irish Naturalist* of 1903 (p. 155). It concerns a blackbird who fought every day and for several hours a day during the whole of March and the greater part of April, after which it made peace. This was in 1898. The duel was resumed in 1899 and in 1900. The gallant bird's equally gallant opponent was its own reflection in a window-pane, upon which, beak to beak, it tapped and tapped again, its ever ready foe returning tap for tap and scorn for scorn, untiringly. Curiously enough, in the second year, a chaffinch started a similar duel on the other side of the same house, resuming in 1900 and 1901, that is, a year after the blackbird had vanished from the scene. The

writer of the account states the opinion that the imaginary birds were regarded as trespassers on the private grounds of the real birds. They were violating the sacred rights of property. But in both cases the initial cause of warfare may very well have had a sexual character.

The song-thrush, when fighting, frequently utters snatches of his song between the rounds. The blackbird probably does so also, as the habit is common to many species, the wren and the robin providing familiar instances. The song of both species is too well known to need description. The song-thrush is a master-singer; his music rivals that of the nightingale's. It reaches less high flights, but, on the other hand, is free from the somewhat harsh notes with which the latter songster is accustomed to intersperse his melody. The blackbird's is much more limited in its range, but to my mind there is not in the song of the thrush anything so beautiful as those few careless flute-like notes that seem almost to come unbidden from his throat. Like our other summer Thrushes, and more so than they, he has the pretty habit of uttering his song "the while he swings from tree to tree."¹ It is true that the blackbird soon comes to the end of his repertoire; and he makes his limitations more obvious by the discords which sometimes close his lay, but distance here, as in things visual, if it does not lend enchantment, will soften disenchantment.

The loud strains of the ring-ouzel and mistle-thrush, though inferior to the music of the song-thrush, are still unmistakably thrush-like in the mellow richness of some of their notes. They are said to gain an added charm from the nature of the surroundings in which they are uttered. But there are few who have heard either the ring-ouzel, perched on an old grey lichened boulder, fling his wild melody across the moorlands, or the mistle-thrush, erect and defiant on some high naked bough, meet the storm with bold exultant notes, who would think it was the song alone that gained; moorland and woodland win an added charm, fleeting it is true, but that in ceasing

¹ Nora Hopper.

leaves behind a want. Of the two, that of the mistle-thrush is the finer; it is not indeed, as a rule, sufficiently appreciated. In one respect it is, to the ears of some, superior to the song of the thrush in that the strain is not broken up into phrases. It flows on easily and continuously for several minutes together.

The redwing and fieldfare are not heard at their best in our Isles; their finest efforts are reserved for the breeding season. But during their stay with us both species may be heard, like starlings, choring in the tree-tops. Individual redwings have frequently been heard uttering a low sweet continuous warbling before their departure, which is said to form part of the love-song. The quality of the latter has, according to the best observers, been exaggerated; it consists, after Howard Saunders, of a few clear flute-like notes, which Naumann qualifies as melancholy and reminiscent of the blackbird. It is followed by softer notes, perhaps those the bird is heard practising before leaving our shores. The fieldfare's efforts to express his love in song have met with even less commendation. "Low, twittering and poor," is the judgment passed upon it by Newton. Another authority, Dresser, damns it with faint praise: "a rather pretty, low warble, constantly interrupted by the usual harsh note." It is frequently begun when the bird is on the wing, and completed after it has alighted.

III

Without merit in its song, the fieldfare is distinguished by the fact that alone of its genus it nests in colonies. As many as sixty nests have been found in three adjoining trees.¹ Colonies of all sizes are met with, and sometimes solitary pairs.² When a colony is disturbed birds fly about over the intruder with noisy *schretts!* and *gheggs!* very different from the familiar *tchack! tchack!*

¹ *Zoologisches Garten*, 1881 (E. F. v. Homeyer).

² Naumann, *Vögel Mitteleuropas*, i. 215.

tchack! heard during the winter. It is the cocks who behave thus; the hens remain in their nests until the hand of the spoiler is nearly upon them.¹

It is curious that the redwing, which we see during the autumn and winter months flying about our fields in flocks just like the fieldfare, should not resemble it in breeding gregariously, the more so as the habits of the two species are so alike in other respects. Closer observation may reveal the reason. A careful comparison of the gregarious instinct in the genus *Turdus* would be of considerable interest, for we have in it the various degrees of the social relationship fairly well represented.

Thrushes, blackbirds and ring-ouzelts are gregarious only as migrants, using the latter term to cover any definite movement from one area to another, whether within or beyond our shores, except local changes of level. When the bond created by the migratory instinct has been broken they separate, each individual or pair going its own way. It is true that, as already noted, these birds may be seen seeking their food in close proximity, but this frequently recurring fact does not make them gregarious. On such occasions they are no more gregarious than the audience in a theatre. They form simply a temporary aggregation of independent units.

The mistle-thrush, like the three species mentioned in the foregoing paragraph, is gregarious as a migrant, but also to a greater or less extent it flocks in this country outside the breeding season. All the evidence goes to show that from midsummer up to the end of the year the various families tend to unite into flocks. Bands of fifty and over have been frequently observed, but to what extent these larger flocks are immigrant remains to be ascertained. At the end of the berry season the species appears to become less gregarious; but on this point, again, more evidence is needed. In any case, towards the end of January, the approach of the mating

¹ *Journal für Ornithologie*, 1864. According to the late R. Bowdler Sharpe, "the 'chuck,' or the harsh challenge so familiar to our ears in winter," can be heard at the breeding-place. See Seebohm and Sharpe, *Monograph of the Turdidæ*, i. p. 204.

season would naturally hasten the process of dissolution among our resident birds, while of course, on the other hand, it would lead to larger aggregations in the case of the migrants.¹

For purposes of comparison it will be interesting to note here a peculiar habit of the American-robin (*T. migratorius*).² This species begins to form into flocks to roost before the breeding season is over. The early flocks, in June, consist of the fledged young of the first broods, accompanied by the adult males, the latter returning from the roost to their family duties each morning and departing again in the evening. Later the second broods and the hens join the flight to the roost, where they continue to go until October, when they all emigrate to their winter quarters. It is further interesting to note that this species, unlike many others, is described as shooting direct into the roost itself, instead of making a halt in the near vicinity before finally going to their sleeping perches.³

The redwing is gregarious in winter and, of course, on migration. The fieldfare, as already noted, has developed the social instinct to a degree unknown to any of its congeners. It is gregarious throughout the year, though the evidence shows that its habit of nesting in colonies is not without exceptions. That this habit is always of advantage to the species is doubtful, except in so far as safety is to be found in numbers against birds of prey. The massing of nests together within a restricted area can serve only to facilitate the work of the spoiler unless, as in the case of rooks, the nests are placed high up enough to make the trouble of reaching them scarcely worth taking. But fieldfares, though they usually build fairly high up, often in slender birches, have not altogether abandoned the Family habit of placing their nests at low levels. While these

¹ Lilford, *Birds of Northants*, i.; Macgillivray, *History of Birds*; Waterton, *Essays on Natural History*; Gray, *Birds of the West of Scotland*; Stevenson, *Birds of Norfolk*; D'Urban and Matthew, *Birds of Devonshire*, 2nd edit.; Forrest, *Fauna of N. Wales*; Ussher and Warren, *Birds of Ireland*; Nelson, *Birds of Yorkshire*; W. H. Hudson, *Nature in Downland*; the *Fauna of the Tay Basin*, and the other Scottish Faunal works edited by J. A. Harvie-Brown; G. Sim, *Birds of Dee*, etc., etc.

² See p. 348.

³ *Auk*, 1890, p. 360 (W. Brewster). The species may of course vary at times its method of entering the roost.

Plate 38

Redwings migrating

By A. W. Seaby



1945

may be seen eighty feet above the ground, they are often so near it as to be within easy reach of human hand or feline claw. They are also found on the ground itself, but this is more particularly the case in treeless districts like the tundras of Siberia.

The habit of nesting on the ground or rocky ledges is common to all our Thrushes in varying degrees. As might be expected it reaches its highest development in the ring-ouzel, who, indeed, in its moorland haunts finds trees and bushes few and far between. But the habit is not exercised only in treeless districts. Blackbirds, and to a lesser degree song-thrushes and mistle-thrushes, will build their nests upon the ground in places where there is no lack of suitable sites in trees and bushes. Sometimes the nest will be found at the foot of a tree, sometimes, as in the case of the thrush whose nest is shown on Plate XIV. (p. 328), in long grass, close to bushes where numbers of other thrushes are at the same time brooding eggs or young. It has been observed that many of the ground nests of blackbirds and thrushes are the later ones, built towards the middle of May, and containing often no more than three eggs, evidently second or even third attempts at breeding. An inference suggested is that the birds have been driven to build on the ground for the sake of greater concealment. In this there is nothing inherently improbable. Birds will under pressure alter their nesting habits. On the other hand, one would think that, whereas in the earlier part of the season, before the leaf was out, ground nests would be better concealed, they would, as the foliage grew thicker, offer less advantages. Otherwise ground nests are sometimes very conspicuous, as was the case with the one shown in the photograph on Plate XIV., which was robbed while many in neighbouring bushes escaped.¹

A fact frequently noticed in the case of the mistle-thrush is the presence near its nest, either in the same tree or an adjoining one, of

¹ See note by Dr. N. F. Ticehurst in *British Birds*, iv. p. 75. For instances of ground nests of the mistle-thrush, see the *Zoologist*, August 1903 ("in a tuft of bent-grass"); *Field*, 1872, vol. xl. p. 559; 1873, vol. xli. pp. 136, 530. It frequently nests on rocky ledges near the coast.

a nest of the chaffinch. Attention was drawn to this by J. Vian in the *Revue et Magasin de Zoologie* as far back as 1865. Both Yarrell and Dresser accept the statements, and it is further supported by Mr. Ussher and Mr. Warren, who, in their *Birds of Ireland*, state that the "breeding of the chaffinch close to the nest of the mistle-thrush has been repeatedly observed in Ireland." There can be no doubt that the smaller bird benefits by being under the wing of so fearless a neighbour. An instance this is of quoted in *Birds of Ireland*. A sparrow-hawk was on the point of seizing a chaffinch with its strong talons, when out rushed the mistle-thrush, and darted upon the back of the hawk. There was a whirring of glancing pinions, the chaffinch dropped to the ground in safety, and the hawk flew off, shaken and humiliated, a sadder, if not a wiser bird. But how much is there in all this to justify the inference, made by Vian, that the chaffinch deliberately seeks the protection afforded by the neighbourhood of the mistle-thrush, and warns the latter of the approach of hawks? It is a very common species, and often builds in the small branches which are found on the lower part of the trunks of large trees. That its nest should frequently be found in the copses that the mistle-thrush loves to frequent is, therefore, not surprising. Nor is it surprising that the latter should attack every bird of prey venturing near its nest whether in pursuit of chaffinches or not. A mistle-thrush requires indeed little or no provocation to make it attack a sparrow-hawk. A good instance of this is given by Mr. W. H. Hudson, who one day observed individuals of the latter species perched, or rather trying to keep perched upon a telegraph wire. Unable to grasp the wire firmly it swayed uncomfortably, supporting itself by a downward pressure of the wings. At this moment a party of mistle-thrushes flew overhead. One paused, hovered for a few seconds, then dropped like a stone upon the hawk's back, and knocked him clean off his perch, after which he resumed his journey, leaving the discomfited hawk to digest the insult at his leisure.¹

¹ *Nature in Downland*. Since writing the above, Mr. F. C. R. Jourdain informs me that in

The mistle-thrush is by no means always as happy in his encounters with his enemies. His habit of building his nest early in the year, before the leaf is out to give it cover, and of placing it in a conspicuous position, generally in the fork of a big tree, renders it easily visible to the keen eyes of crows, magpies and jays. As these birds have an appetite for eggs unrestrained by any prejudice in favour of freshness, they are ready to gratify it whenever occasion offers and whatever the stage of incubation. Mistle-thrushes therefore, in spite of their valour, lose a number of first clutches, a loss which helps partly to account for the scarcity of the species as compared with blackbirds and thrushes whose nests are not raided to the same extent owing to the fact that they are placed as a rule in less conspicuous sites.¹

In the construction of the nest the cock mistle-thrush is said to assist the hen, but to what extent and whether the habit is general are questions that cannot be answered, so scanty is the evidence available. What is known of the cock blackbird's attitude towards nest-building shows that with respect to this habit at least a certain variation in the behaviour of the individuals of a species may probably be regarded as normal. This conclusion, if it can be shown to be exact, is important, for it will explain the contradictory evidence often supplied.² It will also help to correct any tendency to assume that the male normally aids the hen in nidification because one or two individual males have been seen to do so. Further observation may show that non-participation by the cock, though less frequent than the converse, is nevertheless more a normal than an accidental mode of behaviour. The cock blackbird's behaviour ranges from active participation to complete indifference. Two cases are recorded in

Corsica, where there are thousands of acres of timber and very few breeding birds, he has seen the mistle-thrush and chaffinch nesting together though there was probably not another nest of either species within a mile. This certainly weakens the view that the proximity is due to mere chance. But the explanation of Vian assumes a foresight on the part of the chaffinch which is difficult to credit.

¹ Dr. N. F. Ticehurst, in his *Birds of Kent*, states that in this county mistle-thrush's nests are robbed of eggs and young by jays to such an extent that not one out of six of the first clutches are hatched or the first broods reared.

² See, for instance, as a good example of this, the "Classified Notes" on the bullfinch under *Nest and Eggs*, p. 82 above.

which he has been seen carrying material to the site.¹ In a third instance he was seen not only to bring material, but to put it into position on the outside of the structure. That this was perhaps an excess of zeal on his part appears from the fact that his wife saw proper to mend his work after each visit, and, as far as seen, she made herself solely responsible for the internal shaping of the nest, though the cock helped to bring mud for the plaster lining.² Frequently the cock has been observed to accompany the hen on her excursions in search of building material, often apparently taking the liveliest interest in her proceedings, escorting her hither and thither, seeming to approve the quality of the twig or tuft of grass chosen, doing everything, in fact, except the work itself. In these cases he showed, at least, a kind of gallantry with which his mate, not having "views," and happy in the satisfaction of her nest-making instincts, was possibly well content. But this gallantry is not shown by all cock blackbirds. One was kept under close observation three years in succession, and was only once seen to accompany his mate when seeking material for her nest.³ Not long ago, again, I saw a hen blackbird busily engaged in collecting grass, while her mate, near by, and it may be dimly aware of what she was doing, stood cutting up a large worm. Having detached a bit, he swallowed it, then continued pecking for a time, till, becoming impatient, he managed to swallow the rest of the meal at one gulp, after which he flew to a perch, wiped his orange-tawny bill, deliberately and conscientiously, shook himself and flew off. Not once did I see him pay the least attention to his mate, though frequently in her vicinity. Nor, let us add, did she pay the least attention to him. Both, of course, may have had private and particular reasons for behaving as they did, but that is another story.

Less is known of the cock thrush's share in nidification, as it is not always easy to be sure of the sex of the bird seen carrying material.

¹ E. Selous, *Bird Life Glimpses*, p. 206.

² See a note in *British Birds*, iv. p. 44, by Mr. C. Kingsley Siddal, who has been kind enough to supply me with additional information.

³ From information supplied in MS. by the late Mr. Harper Gaythorpe of Barrow, who made careful and detailed notes of the nesting habits of a pair of blackbirds in his garden.

In one case the cock is known to have assisted in bringing to the chosen site the rough material used in constructing the outside of the nest, but he took no part in the construction, nor did he bring the material for the lining. It is highly probable that this thrush did as much, if not more, than most males of his species.¹

Still less is known of the nest-making habits of the ring-ouzel. I can find only one statement based on personal observation, but this has all the interest of the unexpected. It is that the cock was seen doing the greater part of the nest-building. Let us hope that further observation will not diminish the credit gained for his species by this masculine model of domestic virtue!²

The time taken in the construction of the nest varies according to the weather and the state of the hen's ovary. The influence of weather on nidification has already been noted in the chapter on the Crows (p. 50), where it is shown that the attempts made by various species to start breeding again in the autumn are governed by climatic conditions, a lowering of the temperature bringing them to a standstill. The same fact was noted in the case of the spring nesting of song-thrushes by Hewitson in the earlier half of the last century. In fine weather the nests of this species will be completed, and the first egg laid within a week. A hen blackbird was observed in two successive years to take about the same time, working undisturbed, and without aid from her mate.³ The length of time taken is no doubt due to the fact, frequently observed, that building is normally confined to the earlier hours of the morning. When owing to the destruction of the first nest or other cause the hen is in a hurry to get a new one ready for her eggs, the time of construction is shortened very considerably, the birds working at all hours of the day. I have myself seen a thrush

¹ *Country Life*, Feb. 19, 1910 (A. Taylor).

² Forrest, *Fauna of N. Wales*. Bailly, who is generally reliable, states in his *Ornithologie de la Savoie*, vol. ii. p. 214, that both sexes build. Therefore it is probable that further investigation will establish the reputation of the cock ring-ouzel on a firm basis.

³ By Mr. H. Gaythorpe. See note 3, p. 372. The first nest was begun on April 16th or 17th, 1906, and the first egg laid on the 24th following; the second was begun on April 22nd or 23rd, 1907, and the first egg laid on the 28th.

complete her nest between sunrise and sunset. I found it at 9.30 A.M. with the outside frame of dry grass already made; at 12.30 the mud lining was completed, and a few bits of decayed wood studded over it; at 2.30 more wood had been added, and at 5.0, when I again visited it, the task had been finished. If we assume that the bird started work soon after sunrise, the time taken in construction would be about twelve hours. The first egg was laid two days later, on May 5th, the lining having been left to dry in the meanwhile. Mr. Charles Dixon, in his *Rural Bird Life*, states that he removed a thrush's nest from an exposed position three times in succession; the first new nest was built in three days, the second and third in one each, and all were well made. The first egg was laid on the day following the completion of the last nest. Weir, quoted by Macgillivray, gives an instance of another nest begun on the Thursday, and ended on the Friday. The first egg was found in the still wet nest on the Saturday. Hewitson gives a similar instance, and no doubt many such could be collected, both in the case of the thrush, the blackbird, and other species.¹

IV

In the material used for the construction of their nests our Thrushes resemble one another very closely. Each nest consists normally of three parts, the foundation and outside composed of a variety of vegetable matter, inside this a hard plaster of mud or other material, and inside this again, in the case of all except the song-thrush, a lining usually of fine dry grass.

The material used for the exterior of the nest varies considerably from bird to bird within the same species. Dry grasses are largely used. The prettiest nests are those having the outside made entirely of compact velvety green moss. This, well set in strong forking boughs, and canopied by leaves and shade, with its neat inner cup, and lying there snug within it, side by side like precious jewels, the

¹ For an instance provided by a robin, see p. 439.

four or five bright blue or green spotted eggs, forms a work of art that, both in its harmony of shape and colour, is a sight that would, one imagines, stay even the profaning hand of the collector. Not less beautiful are said to be the lichen-clad nests of the redwing, but for these one must go to the birds' northern homes, to Iceland, the Færoes, Russia, or Siberia. In addition to the customary materials, Thrushes, like other species, will sometimes use all kinds of odds and ends, such as paper and coloured wool. One mistle-thrush has been known to make the outside of its nest gay with the white feathers brought from a neighbouring colony of herring-gulls.¹ Another nest of the same species, shown on Plate XIII., p. 318, is all decked with paper streamers, as if the bird had made preparations to salute the passage of royalty. The finishing touch is supplied by a loose end of cord which is seen hanging with unstudied grace down the side of the trunk.

A variety of material will enter into the exterior composition of one and the same nest. This is illustrated by the following details of five nests of the song-thrush, all of which I found in gorse bushes within fifty yards of one another: (1) grass with a small amount of gorse and twigs, and one bit of wool; (2) grass, moss, stalks; (3) grass, moss, bracken; (4) grass, a little wool; (5) grass, moss, hairs. A sixth nest built in a gorse bush within the same area had its outside composed of nothing but the bristling twigs of this bush. It would be interesting to know why some of the birds chose one material and some another. The accessories, bracken, wool, hair may have been accidental discoveries, rare finds, that took the fancy of the builder as he went collecting here and there. But why did one thrush totally ignore the staple material—dry grass, and use gorse alone? Both were equally accessible. Again, in one and the same thicket I have found thrush's nests with the outsides made of moss only, of moss mixed with other material such as twigs, dry grass, stalks, and of dry grass only. The most accessible was moss, which lay strewn in

¹ *Zoologist*, 1906, p. 10 (S. G. Cummings).

quantities about the ground. To get the grass, however, it was necessary to quit the thicket and fly to the open. In a plantation of young spruce firs I found six thrushes' nests, two composed chiefly of bracken, three of grass, and one of moss and twigs. Bracken, but not grass, was available inside the plantation. From these examples it is clear that the bird does not necessarily choose the most accessible material, and that, when two or more kinds are equally accessible, different birds will make different choices. The explanation may lie in the fact that birds, like human beings, are creatures of habit; they are moved by the Wings of Custom, if not by its Wheels. It may be that the young bird, when constructing its first nest, takes the first suitable material that it finds. Its tendency will be to return to the same place next season, and also to seek the same material just where it sought it before. That birds do return to the same nesting-place year after year has been proved in the case of more than one species. And a hen blackbird, which built three years in succession in the same corner of a garden, made the outside of the first nest (1906) of dry grass, short straws, roots, paper; the second (1907) of dry grass, short straws, roots and other material not mentioned; the third (1908) of dry grass, roots, leaves, paper.¹ If now, a nest built, let us suppose, of dry grass in some tree in the open is destroyed, and the bird then constructs another in an adjacent thicket, the force of custom may well lead it to fly out and away to the old spot for its dry grass in spite of the fact that doing so demands more time and labour than taking the moss that lies in abundance right under its new site. Having been accustomed to build its nest of grass, the bird continues to use the same material whether it be the most accessible or not. This theory, which would apply equally to cases in which both sexes took part in building is plausible enough. But it requires to be verified; and this could be done without much difficulty by marking pairs of birds, using leg-rings of different colours, and watching their proceedings from year to year.

¹ The pair were recognised by a peculiarity in the song of the cock. See note 3, p. 372.

Having fashioned the dry grass, moss, or other material into the form of a cup, our Thrushes without exception normally plaster the inside of it with a layer composed usually either of mud or of the mixture of mud and vegetable matter which may be picked up from any wet ditch, the margin of a pond or stream, or even from the streets of our large towns. I have seen a thrush collecting a beak-load in a spot no more rural than the gutter of Tufnell Park Road, London, N.W. This plaster, when dry, is compact, hard, with a smooth surface, and sometimes half an inch or so thick. It requires some effort to break across and shows evidence of having been subjected to considerable pressure by the bird. It is not, of course, invariably present. Birds do not, any more than human beings, adhere rigidly to the normal. I have found a blackbird's nest composed externally of green moss and internally of fine dry grass, there being nothing between the two but a little loose soil. The bird's instinct, for it can be nothing else, had led it to bring the soil to the nest, but at that point the instinct had mysteriously ceased to function. This did not, however, prevent the pair from successfully rearing their young, a fact which makes it more difficult to understand the process by which the mud-lining became general.

As already noted, the plaster lining is not the final stage. All except the song-thrush cover it normally with fine dry grass. Unless enough of this is worked securely over the rim of the nest it tends to be trampled down to the bottom of the cup by the feet of the nestlings, so that the plaster beneath is exposed.

The interior of the nest of the song-thrush is, I believe, unique,¹ and like many common things, it has been largely taken for granted, and has consequently not received the attention it merits. I make no apology, therefore, for going into details; they will show that there is a greater variation in the materials used than might

¹ The bare-eyed thrush of S. America (*T. gymnophthalmus*) is said to build a nest with a mud lining and no soft material on it, but whether it has the song-thrush's addition of dry wood, etc., is not stated. See Seebohm and Sharpe's *Monograph of the Turdidae*, 1902.

be inferred from the published accounts. They are gathered from an examination of fifteen nests, found in bushes on a common, in dense thickets, in garden hedges, on the ground in high grass. The eight classes in which they are arranged represent eight different variations in the nature of the material used in the composition of the plaster with which the interiors of the nests were lined.

1. Plastered entirely with small bits of decayed wood (3 nests).
2. Plastered entirely with small bits of decayed wood and chips of dry stems (1 nest).
3. Plastered with decayed weeds, more or less mixed with earth, and set thickly with bits of decayed wood (2 nests).
4. The same without the admixture of earth (4 nests).
5. The same as 3, but with the addition of chips of straw (1 nest).
6. Plastered with decayed weeds, without wood or earth, but flecked with chips of straw (2 nests).
7. Plastered with a thin mud paste, without visible vegetable admixture, set thickly with chips of dry grass stalks (1 nest).
8. Plastered only with earth and fine decayed vegetable matter (1 nest).

In all except the first two classes the basis of the plaster is, as in the case of the other species, composed of mud or decayed weeds or both. A ninth variation is supplied by the use of horse and cow-dung; a tenth by a mixture of the same with mud;¹ an eleventh by the addition to the wood chips of particles of reed and thistledown (Hewitson). There are no doubt others. But this is enough to show the extent of the possible variations.

The most interesting of the thrush's nest-plasters are the first and second, those made entirely of decayed wood, or of the same combined with chips of grass-stems or straw. These show a hard, fairly smooth surface, and are attached directly to the inside of the

¹ *Country Life*, February 19, 1910 (A. Taylor).

cup formed by the exterior material of the nest, in some cases of moss only, but with what is uncertain. Nor is it clear how the bits and chips forming the plaster, which is thick enough to show them superimposed one upon the other, are cemented together. Some of the decayed wood in the nests examined had the appearance of having been reduced to a state of pulp by pressure upon them when wet, but separate bits were numerous, and in one lining I found a flat piece an inch long by a quarter of an inch broad. Naumann, who found several linings of this type and held they were the most common, suggested that the necessary cement was supplied by the saliva of the bird. The bits are certainly often gathered dry; I have seen a thrush emerging from the interior of a hollow trunk with a supply in its beak. What shows in the beak is but a small part of the load carried, as I found out one day after examining a nest in process of building. As I turned away from it a little shower of something fell on my shoulder; there I saw a number of small bits of wood, and above me on a bough the owner of the nest with its beak open, and an air which might well have been one of disgust or of astonishment or both. Whether these bits were moist I did not note, but in any case those carried visibly in the mandibles would not be moistened by saliva, unless the bird, when in the nest, deliberately took them up and turned them about in her mouth. Seebohm states that when the thrush is unable to get its wood wet, she moistens it in the nearest water, but he does not make it clear that he saw this happen, nor does he give any authority for the statement.¹ It is quite possible that the wood is laid on a damp substructure, wet enough to soak more than one layer in the plaster, some of it being reduced to pulp by pressure. The plaster is found wet when completed, and is left to dry, unless the bird is in a hurry.

It is difficult to find an explanation of the variations which occur in the composition of the thrush's nest-plasters. It may be that the instinct of the species is to seek decayed wood, using it alone or

¹ *British Birds*, i. 218.

studded in mud. When the wood cannot be found, which is likely to occur fairly often, other material is perforce used.

To account for the partiality for decayed wood shown by this species is still more difficult. Wood is certainly not a necessary constituent of a good plaster, for the mud linings of the other Thrushes, or of the song-thrush itself, when it omits the wood, are just as efficient for their purpose. One fails to imagine by what process the instinct could have arisen which impels a song-thrush, building its nest for the first time, to go about deliberately seeking for a material so unusual.¹ Nor is it clear what it gains or loses by not adding the inner grass lining of its congeners. A layer of grass has at least the advantage of making it unnecessary for the bird to wait for the plaster to dry, if in a hurry to lay its eggs. Eggs laid on wet plaster are liable to adhere to it and get broken when moved either accidentally or intentionally by the bird's feet. Let us add that the very solidity of the lining has its dangers. After a heavy rainfall nests have been seen more than half full of water, and Lord Lilford found one with four eggs in it afloat. But this danger is incurred also by blackbirds, whose young have been discovered dead in a nest nearly half full of water.²

Blackbirds, thrushes and mistle-thrushes will rear more than one brood in the same nest. Several instances have been recorded, among them one by Lord Lilford in the work just quoted, who gives the case of a thrush's nest in which two broods were reared. Nor was this all, for the same nest was subsequently converted into a winter residence by dormice.³ A case of three broods being reared from one and the same blackbird's nest is recorded by Dr. Hennicke in Naumann's *Vögel Mitteleuropas*. Another instance is recorded in the *Field*, June 15, 1901. A hen of the same species has been observed repairing, on June 7, a nest which the first brood had left about May 28.

¹ For the evidence that the choice of nesting material is instinctive, see Professor Lloyd Morgan's *Habit and Instinct*.

² Lilford, *Birds of Northants*, 1.

³ For the mistle-thrush rearing two broods in the same nest, see the *Zoologist*, 1885, p. 335; and 1877, p. 156 (two cases). Another case was noted by Mr. F. C. R. Jourdain (*in. litt.*).

It contented itself with adding material to the lining and also to the rim of the structure, thereby increasing its height.¹ A new nest is sometimes built upon an old one. A striking instance of this fact is supplied by the editor of the *Zoologist* in the year 1862 (p. 566): he examined an edifice, built by a blackbird in thick ivy on a summer-house, which consisted of eight nests placed one above the other, out of each of which a brood had been reared. That the blackbird does not by any means always use again the same nest or the same site is shown by the well-known case in which an individual of this species made its first nest in ivy on a wall, the second in a yew-tree, the third in an apple-tree against a wall, and, on deserting this, a fourth in a birch-hedge, which, being likewise deserted, was followed by a fifth in a vine trained up the wall of the house. In these nests twenty-five eggs were laid, and fourteen young reared—a creditable performance.² The thrush and mistle-thrush will frequently build fresh nests in the same season. What is the behaviour of the ring-ouzel with respect to its second clutch I have been unable to find out. So far the evidence shows that three species either build new nests or repair the old for their second broods. It may be that the normal course is to repair, but that a bird will build anew, if it feels that the first site has become unsafe owing to discovery or disturbance. But this is mere conjecture.

Cases of what are known as “dual nests” of Thrushes are occasionally reported, that is of nests in which the eggs of two species are laid side by side. But it is not always easy to decide whether the juxtaposition is due to birds or boys. What has the appearance of being a genuine case is one recorded by Miss E. L. Turner in *Country Life* (May 22, 1909). She found and photographed a hen blackbird sitting on a thrush’s nest containing four young blackbirds, and one young thrush. It contained originally three thrush’s eggs and four blackbird’s. Another similar case is given by Mr. P. G. Ralfe, in his *Birds of the Isle of Man*, of a black-

¹ See note 3, p. 372.

² *Zoologist*, 1848, 2997.

bird sitting in a thrush's nest on three eggs of this species and three of its own.

Exactly how a bird constructs its nest is a question that often suggests itself, but is not easy to answer owing to the difficulties of observation. In the case of the Thrushes evidence enough is available to permit us to give a fairly detailed description of the process, subject to verification. The bird begins by bringing in its beak to the site chosen the rough material for the foundation and frame of the nest, arranging it so that it gradually takes roughly the form of a cup, or, in any case, so that there is in the middle a hollow into which the bird can get. A pair of blackbirds, which were watched at close quarters through a greenhouse window, began by erecting a flat platform of rootlets, twigs, and grass stalks. They then piled the material on the margin of the platform, leaving the centre as it was. Each bird laid his contribution on the top of the growing circular wall of the nest, and then stood upon it, pressing it down with the bill, first on one side, then on the other. The cock occupied about a minute at this work, the hen much more, as she was not content to press in her own stalk, but overhauled the work of her mate, and added finishing touches to the whole structure. On the morning of the third day's operations the hen was seen inside the nest shaping the cup with her breast.¹ When thus shaping the interior of the nest, the bird turns round and round, pressing with its feet and breast, also, possibly, adding the pressure of its wings, which are kept half spread. The work is done with such energy that the builder has at times to pause with open beak to recover breath and strength. The pressure from inside outwards would be met from outside inwards by the supporting branches or twigs forming the site. On any side from which these were absent the exterior of the structure would probably have the rough, loose appearance of the nest shown in the photograph by Mr. Taylor on Plate XIII., p. 318. The top and outside edge of the rim are finished off, sometimes at least, by pressing hard against it with the

¹ C. Kingsley Siddal (*in litt.*).

underside of the tail, which the bird, when itself in the cup, suddenly bends down from time to time with a spasmodic jerk. This was seen to be done by Mr. E. Selous in the case of a hen blackbird. Another observer, Mr. C. Kingsley Siddal, saw a hen of the same species, while moving slowly round inside the cup with a kind of "kneading" motion, first in one direction, then in the other, frequently pull up the edges of the cup with her bill and press the walls between her lower mandible and her breast. The material for the lining is put into place with the beak, and is then pressed against the inside of the cup with the breast, feet, and probably wings.¹

Turning from the nest to the eggs, it is worth noting that here again the song-thrush stands apart. Though certain varieties of its eggs resemble those of its congeners, the normal coloration is a clear blue marked with almost black spots; whereas the normal coloration of the eggs of the blackbird, ring-ouzel, and mistle-thrush, as well as of the fieldfare, redwing, and of several foreign species, is bluish-green, freckled mainly with reds and browns. Some American Thrushes lay clear blue unspotted eggs, as does occasionally the song-thrush, but the combination of blue and black spots appears to be unique within the whole genus unless we except the Oregon-robin (*T. naevius*), which is said to lay an egg similarly coloured, in a nest, however, of the ordinary kind, lined with grass. The song-thrush has, in all, three claims to distinction; its wood plaster, its egg, and lastly, its immense superiority as a songster. Yet in its plumage coloration it is far more typically Thrush-like than, for instance, either the blackbird, the ring-ouzel, or the blackthroated-thrush, a Siberian species, about the size of the fieldfare, which on two or three occasions has been misguided enough to visit the British Isles, and leave its skin in our museums—three species which construct the typical nest and lay in it the typical eggs of the genus. If ever it becomes possible to work out the evolution of the genus *Turdus*, the rôle of

¹ This account is based chiefly on notes by Mr. Harper Gaythorpe, Mr. C. Kingsley Siddal, and myself, and on information given in Mr. Selous's *Bird Life Glimpses*, p. 175, and *Country Life*, February 19, 1910 (A. Taylor).

our song-thrush in it will undoubtedly prove to be of singular interest.

The eggs are incubated for about two weeks. To what extent the cocks of our Thrushes participate in the task is uncertain. The statement is frequently made, and by good authorities, *e.g.* Naumann, Yarrell, Bailly, that they relieve the hen at times, but one rarely meets with any one who has actually with his own eyes seen a cock on the nest. Mr. Harper Gaythorpe, already quoted, who watched a pair of blackbirds three years in succession, never saw the cock incubating, and he visited the nest almost at every hour of the day. My experience has been the same. I have sometimes been almost deceived into believing that the cock was on the eggs, for in certain lights it is not easy to distinguish an old hen blackbird from some cocks, but the illusion was dispelled as soon as I placed myself at a different point of view. Mr. E. Selous writes of the same species: "I have never come upon the male sitting, and whenever I have watched a nest where eggs were being incubated, there has never been any change upon it; the birds, that is to say, have never relieved one another, but the hen, having gone off, has always returned, the nest being empty in the meanwhile."¹ On the other hand, Mr. Jourdain has flushed a cock blackbird from a nest with eggs, and Miss E. L. Turner has seen one sitting over three eggs and two young. In this case, however, it is likely that he was there to brood the young. What has been said of the blackbird appears to apply equally to the ring-ouzel.² Owing to the similarity of the sexes it has been more difficult to observe the song- and mistle-thrush, but in the case of both the evidence favours some participation by the male. Here, as in the case of nest-making, and probably also of the brooding of the young and the feeding of the sitting hen, the behaviour of the cock varies with the individual. Nor need this surprise us, for the cock's relations to these functions is infinitely less intimate than that of

¹ *Bird Life; Glimpses*, p. 207.

² *Zoologist*, 1901, p. 28 (E. P. Butterfield).

Plate 39.

Hen blackbird incubating

By G. E. Collins



the hen. The self-sacrificing devotion of the latter is illustrated by the following statement made by Mr. A. Taylor, who had a song-thrush's nest under observation close to his bedroom window. On looking through the window at twelve o'clock one night, he saw the hen bird to all appearance dead upon the nest. "Her back was covering the eggs, and with feet in the air, and head hanging on one side, she seemed to be entirely lifeless." A tap on the window instantly brought her to life; she awoke with a start, turned, and sank rapidly into her normal crouching position upon the eggs. Subsequent observation showed that she was rarely to be found sitting at night in the accustomed way, "but either on her back or on her right or left side." It would be interesting to know whether this strange method of incubation was anything more than an individual eccentricity.¹

It is not difficult to understand that so active and warm-blooded a creature as a bird must find it trying to sit hour after hour, day and night, in the same position, even though possessed by an instinctive desire to incubate. How fatiguing a long period of incubation can be will be realised by any one who has seen an eider-duck forced to quit her nest, scarcely able sometimes to keep her body above the ground, her webbed feet striking against the rocks as she flies with heavy wings toward the sea.

V

The individual differences in the behaviour of cock Thrushes with regard to their incubatory and nest-building duties does not appear to repeat itself in the case of the feeding of the young, the evidence being overwhelmingly in favour of habitual participation. As soon as the nestlings break their shells, the cock is to be found ready at the nest, though he may not previously have been near it for a fortnight. During the first few days after this event, he

¹ *Country Life*, February 19, 1910.

has been seen, indeed, to do all or nearly all the work. The cock thrush that was father to the young birds shown in the right bottom corner photograph of Plate XIII., p. 318, fed both them and his mate, who was occupied in brooding, till a spell of hot weather came to harden the ground, and keep the worms below, a change that made his arrivals with food far less frequent, despite the growing appetites of the young. "Whenever his absence was at all prolonged, the hen was visibly anxious, and she developed the habit of flying off to meet him, taking the worms he had collected, and returning with them to the nest. Eventually, as the young ones were getting well fledged, their mother brooded them only at night, and devoted her whole time during the day to procuring worms."¹ This example shows clearly enough that whereas the non-participation of the cock in nest-building and incubation leads to no serious consequences, his neglect of the young would certainly result in their being insufficiently fed, for the hen has to give a large part of her time to brooding in order to protect them from heat or rain.

It is interesting to note that Bailly, writing as long ago as 1853, noted that, like the thrush just referred to, the cock ring-ouzel alone, or almost alone, undertakes the feeding of the young during the first five or six days of their lives, leaving the hen to brood. He states that the food brought, worms or insects, is given by the cock to the hen, and by her to the young, but here again individual practice may be found to vary.²

The fairly detailed information we now possess about the life of young birds in the nest is largely due to the rise during recent years of the naturalist-photographer. He was not long in finding out that their eggs, and particularly their nestlings, acted as an irresistible magnet to bring the parents, sooner or later, within range of the camera. He took advantage of the fact and, in doing so, could scarcely help noting much that was new or in process of being forgotten. He has photographed birds in almost every act of their

¹ *Country Life*, February 19, 1910.

² *Ornithologie de la Savoie*, vol. ii. p. 215.

daily life at the nest, and the cinematograph has enabled him even to achieve the impossible, and give pictorial expression to continuous movement. Our Thrushes have received their share of his attention, and soon it will be possible in any of our cities, and at any season or hour, to see, on payment of a few pence, a blackbird or a song-thrush go through the whole process of feeding its young. But this sight, however excellent and educative, is a poor imitation of the reality seen at close quarters or through a strong glass. Watch a living thrush alight on the edge of her nest, her beak alive with worms, small and large, the latter in fragments. The first contact of her feet, the brush of her wings, however slight, act like the release of an invisible spring: up from the bottom of the nest there starts an eager cluster of gaping yellow mouths, swaying unsteadily, if the nestlings are still unfeathered, on the end of trembling stalk-like necks. The mother looks at the yellow abysses, and chooses. She does not merely put the worm in, but thrusts it into the gullet, and presses it down. She then withdraws her bill, still well loaded, for only one victim has been detached from the bundle, cocks her head on one side, looks to see if the worm has gone well down; if it has not, she gives it another shove, and if then it will not, there being no room, she takes it out, and thrusts it down the next abyss. And so on with commendable impartiality until the supply is exhausted, whereupon the quaking cluster sinks, to become a confused coil of heads, beaks, necks, limbs, rotundities, and so remains, silent but unsated, until the release is again touched. This scene may recur with variations in detail, some two hundred times in the day, a fact established by Macgillivray's noted correspondent Weir, who watched a pair from 2.30 A.M. to 9.30 P.M., both cock and hen working hard, especially in the early morning and evening, to cope with the appetites of a nearly-fledged brood. The food brought consisted not only of worms but of snails and slugs.¹ One wonders how the young can eat their two hundred meals

¹ Macgillivray, *History of Birds*, vol. ii.

and live, but wonder changes into something akin to awe when one contemplates their majestic abdomens, so vast in proportion to the size of the creature, that by contrast they reduce to an alarming exiguity even the proportions of the proverbial alderman.

On one occasion the parent bird was seen to push down the throat of one of its young a worm it had omitted to cut up. Seemingly unaware of the omission, and under the impression that a fragment would remain behind, it withdrew its bill, still holding one end of the worm. The young bird on its side, feeling that the portion it expected to remain was following the rest up, closed down upon it and held on, justly indignant. There was a tug-of-war, shown in the photograph on Plate XIII., p. 318, ending in the release of the worm, which was there and then carved up on the edge of the nest, and the fragments duly divided. This parent thrush was more intelligent than a blackbird which, according to Weir, insisted on one of its nestlings swallowing a worm four inches long. The heroic youngster, after violent efforts, achieved the feat, but one is not surprised to learn that it rested from its labours for three hours afterwards.¹ Not all parent birds are as insistent as this one. I have found a nestling thrush with the end of a long worm hanging from its beak. Apparently this youngster had been left to digest its meal in segments.

It occasionally happens that all the young in a nest are literally full; in which case, whether there be a will or not, there is clearly no way, our proverb to the contrary notwithstanding. The parent is compelled to recognise the fact, and will then often brood, still holding the unfortunate worms in her beak. This was not, however, the procedure of a tame thrush set to act as foster-parent to a nestful of wild young of the same species. When these showed a disinclination to open their mouths, it is reported to have tapped them soundly on the head until they did so. None of your new-fangled notions for this bird. It believed in the good old methods,

¹ Macgillivray, *History of Birds*, vol. ii.

rendered no doubt all the easier of application because the victims were the offspring of another.¹ An example of inverted Squeerism!

A fact which has been made prominent by the photographer-naturalists is the constancy with which birds tend to repeat certain temporary activities. It has been illustrated by the frequency with which one of a pair or both will, on approaching the nest, make use of the same perch. The mistle-thrush shown feeding her young on Plate XIII., always arrived on the side furthest from the photograph, her mate always on the side nearest, thus always presenting his back to the lens. Similar facts are given by Mr. Herrick of certain American species in his *Home Life of Wild Birds*.²

Another fact, rediscovered by the photographer-naturalists, but recorded long ago in the pages of Macgillivray's *History of Birds*, by the indefatigable Weir, is that mistle-thrushes, blackbirds, and song-thrushes, and no doubt also ring-ouzel, when removing the excreta of the young from the nest almost invariably swallow them. Two or three are sometimes swallowed in succession. Usually the parents wait for these articles after the young have been fed, and the look of attentive scrutiny then assumed has often been mistaken by the uninitiated for the lingering gaze of parental love and devotion. The habit of many other species is merely to convey the excreta away some distance from the nest and drop them. This is not difficult, as the loose viscid matter which composes them is contained in a thin sac strong enough to be held, without breaking, in the beak. It is easy to understand that birds should remove the excreta so as not to foul their own nests, or, at least, the interior of the nests, for some species, the greenfinch for instance, occasionally leave the outside of the nest in a foul enough condition. But how certain species came to acquire the habit of swallowing them will be difficult to explain. Several facts bearing upon the question are given by Mr. Herrick in the work above quoted, including some relating to the American-robin (*T. migratorius*)

¹ *Zoologist*, 1856, p. 5261.

² See also p. 409 (Stonechat).

which show that in this species at least the habit is not invariable, individuals having been seen both to swallow the pellicles and to carry them off, in order sometimes to let them drop, sometimes to inspect and devour them, in whole or part.¹

Towards the end of a fortnight after birth the young are fledged. They do not necessarily all go forth at the same time, unless scared. I have found one left in sole possession of the nest seated erect in the centre of it, almost a startling figure, seen thus with unaccustomed spaces around it, looking out upon the world with that air of placid but inflexible gluttony about the corners of the mouth that is peculiar to young birds. The immediate causes of departure are various; in most cases, no doubt, the mere restlessness of a growing young creature. In other cases it is due to accident, the bird, perched on the edge of the nest or the back of its fellows, losing its balance in moments of excited anticipation of a coming meal or when exercising its wings. Once out of the nest, the young tend to scatter. They keep moving, either upon the ground or among the branches, and indicate their whereabouts to their parents by shrill notes, in the case of blackbirds and thrushes the familiar *Pttrreep!* or *Pttrrik!* so familiar to bird-lovers especially in May and June. They continue to be assiduously fed for at least a fortnight. To what extent this is done when the parents have started preparations for a second or third brood has not been closely studied, but it is obvious that the greater part of the work must then fall upon the cock, a fact which still further helps to explain why he, though neglectful of his nest-building and incubatory duties, does his share of the feeding. The following notes relating to a pair of blackbirds are all that I have bearing on this point, and they show little except that the young continue to be fed after the second laying has begun. On May 26th or 27th the young of the first brood were out of the nest. On June 7th the hen was repairing the same nest. On June 9th there was one egg in the

¹ This variation in the behaviour of individuals within a species is further illustrated by the greenfinch, the last bird, so one would think, to swallow the fæces. Yet a hen was clearly seen to do so. See *British Birds*, iv. p. 80.

nest, and on the same day the cock was seen still engaged in feeding the young of the first brood. Whether the hen continued to feed them was not noted.¹

In defence of their young both the blackbird and the song-thrush have been seen to feign injury in order to divert the attention of an enemy. A writer in the *Field* states that he saw a thrush retreating upon the ground before him with its wings trailing, as if broken. When he returned to the spot from which it had started, and found the nest, the bird "recovered its normal position and began flitting from bush to bush in great agitation." The following additional details of this incident are worth giving, as they supply an interesting example of an apparently intelligent adaptation to new and unusual circumstances. The nest was in a small bush, but overturned. Immediately below it, in a hollow in the ground, neatly lined with dry grass, were four half-fledged nestlings. If this dry grass was put in as a *lining*, and not as an *exterior*, the incident is all the more remarkable, as it shows a distinct departure from custom.²

The only case I have been able to find of feigning by the blackbird is equally interesting. One of a pair used to feign distress, by trailing and flapping its wings on the ground in order to divert the attention of a cat from its young. Puss was led up a tree and there left. The performance occurred so often that a fox-terrier on the premises is reported to have learnt the meaning of the blackbird's cries; it used to issue forth and take advantage of the cat's pre-occupation to attack it suddenly and triumphantly in the rear.³

Similar cases of feigning are not unknown among others of the Family, but they appear to be rare. It is, however, exceedingly important that they should be carefully recorded, whenever seen, for the feigning instinct, if it be an instinct, is one that presents several points of interest to the student of animal psychology.⁴

¹ Harper Gaythorpe. See note 3, p. 372.

² *Field*, 1901, vol. xevii. p. 976 (L. R. W. Lloyd).

³ C. R. Mitchell, *Nature's Story of the Year*, p. 90.

⁴ See Lloyd Morgan's *Habit and Instinct*, p. 248.

The only other member of the genus *Turdus* which has been said to feign injury is the ring-ouzel. Seebohm writes of it reeling and tumbling on the ground to decoy its enemy away. Commenting on this, another observer states that he has never seen the bird do more than "flutter for a few yards in a lazy sort of fashion over the tops of the heather." There we may leave the matter until further evidence is forthcoming.¹

Whether the ring-ouzel feign or not, it is certainly remarkably bold in defence of its young, flying at the intruder with angry, discordant notes, circling round him, perching on some rock to hurl abuse at him, its tail jerked erect, its wings impatiently flicking, and, if the young or nest are too closely approached, giving him the wind of its pinions, almost striking him, and sometimes indeed actually doing so, even to the extent of knocking off his cap.² A mistle-thrush has also been seen to fly at and strike a boy who was climbing to its nest.³ When its nestlings are approached, the song-thrush will frequently snap its mandibles, and has been known to peck. I have seen it also puff out the breast feathers, hump the back, and lower the head—make itself big, in fact. This it accompanied by its note of alarm, *ptick! ptick!* It is interesting to note that the puffing out of the feathers is used by the thrush to express feelings not only of anger but of love.⁴

Young thrushes have many enemies. The worst is without doubt the domestic cat, who not only claws them out of the nest, but stalks them when fledged. They are persecuted also by crows, jays, magpies, hawks, owls, dogs, foxes, squirrels, the weasel tribe, rats, snakes, boys, and bird-catchers. If heavy continuous rain falls during the breeding season, many young are drowned in the nest. Occasionally the weaker nestlings are pushed to the bottom of the nest, and die under the feet of their brothers and sisters. In fact the

¹ Seebohm, *British Birds*, i. p. 248; *Zoologist*, 1901, p. 28 (E. P. Butterfield).

² Forrest, *Fauna of North Wales*, in which an instance is given of the intruder's cap being knocked off by the cock, as the former was bending over the nest.

³ F. C. R. Jourdain (*in litt.*).

⁴ See p. 362.

number of nestlings that survive to breed is comparatively very small, and the yearly addition to the parent stock is balanced before the winter is over by the loss caused through the ravages of cold and hunger referred to earlier in the chapter. How great the annual mortality is may easily be realised from the fact that the number of individuals within each species remains more or less the same in spite of the great quantity of eggs that are laid, a fact which is not, of course peculiar to the genus *Turdus*.

VI

It is left for me now to describe the various call- and other notes of the Thrushes. This can only be imperfectly done, for very little attention has been paid to the subject, though there is no doubt that a careful comparison of the notes uttered by the various species in the genus would prove not only a valuable contribution to the study of its evolution, but would throw no small light on the origin, meaning, and development of bird language. My own observations are limited to the blackbird and song-thrush.

What strikes one in studying the notes of birds is that they appear to be differentiated rather according to the relative intensity of emotion they express than the function they perform. This is well illustrated by those of the blackbird and song-thrush. They have each two common notes. Both utter a sound that may be syllabled as *tchuck!*, and the second note of the thrush *ptick!* (the *p* scarcely sounded) corresponds to the familiar *mink!* of the blackbird. It probably requires a fine ear to distinguish much difference between the *tchuck!* of the two species, but with a little practice it is quite easy to utilise the second notes as a means of identification. Both notes, the *tchuck!* and the *ptick!* or *mink!* are used to express alarm, very often on the same occasion, but the more intense the alarm of the bird, the more frequently and more rapid become the *pticks!* or *minks!*, till in moments of extreme excitement these notes are

run together to form a continuous fusillade, *ptickiptickticktick!* . . . or *minkminkmink!* . . .

The extent to which the above notes are used to express alarm varies considerably from individual to individual. This has struck me particularly when approaching the nests of thrushes. Some, when disturbed, will disappear without a sound, others utter *tchuck!* and *ptick!*—others one of these notes only. The behaviour of the same bird, again, will vary on different occasions. All these variations occur whether the nest contains eggs or young. They are possibly to be explained by the length of time a bird has been sitting. If thoroughly fatigued, it has probably little heart for protest.¹

As a bird's vocabulary is very limited, it is not surprising that the same note has to do service for the expression of more than one emotional state. For instance the *ptick!* of the thrush is used not only to express the more intense feelings of alarm, but it is heard when the bird is fighting, and also, according to Naumann, when it is in the excited condition that precedes migration. I have heard the blackbird utter its *mink!* when courting, when watching a fight between thrushes, and before roosting, when it may also be heard uttering the *tchuck!* and another note, *weet!* of which more presently.

It is sometimes not at all easy to divine what meaning is to be attached to a bird's utterances. Two examples will make this clear. Beneath my sitting-room window is a small enclosed lawn. Into this, early one morning in June, there came a cock blackbird. He hopped all round it, pausing here and there to cast a glance upon the soil. As he went, he uttered at every few steps a subdued and meditative *tchuck! tchuck!*—accompanied by somewhat disdainful flicks of wing and tail. Then with a final *tchuck!* he disappeared through the hedge. It is possible to explain these

¹ These conclusions are based on records of visits, in some cases repeated two to four times, to thirteen different nests.

tchucks! in more than one way. They may, for instance, have expressed disapproval of the state of the ground, which had been baked hard by hot weather, or a feeling of internal discomfort due to an insufficient breakfast, or yet again, they may have been caused by a sense of alarm previously excited and in process of subsiding. On another occasion, on the same lawn, I observed a cock blackbird, possibly the same, making a meal of a large moth. I regret to have to say that, having himself completely devoured the body from end to end, he collected the wings and flew off with them in his beak, presumably to his nestlings. During the meal he uttered the same subdued *tchuck! tchuck!* If one wished to put a human interpretation upon his proceedings, one might very well imagine that this blackbird was chuckling to himself in anticipation of the jest he had the bad taste to wish to perpetrate at the expense of his wife and family. The real explanation is, no doubt, quite different; possibly the "tchucking," like the purring of a cat, expressed merely a sense of satisfaction.

The *tchuck!*—as we have seen—appears to express the less intense emotional states. It corresponds possibly to the *tac!* of the ring-ouzel, the *tchack!* of the fieldfare, and the *tchik!* of the redwing. Many foreign species of the *genus* appear to have a similar note. The dusky-thrush (*T. leucomelas*) of South America has exactly the "subdued but querulous chuckle of the blackbird." Thus Mr. H. Durnford in the *Ibis* (1877, p. 166). In a later number of this periodical (1894, p. 161), another observer, Mr. O. V. Aplin, refers to what is, no doubt, the same note as being "like that of our song-thrush," between whose *tchuck* and that of the blackbird there is but little difference. The American-robin (*T. migratorius*) has a "clucking" note that has been syllabled as *tuck!* A similar "clucking" note is ascribed to the Cape-thrush (*T. olivaceus*), and the bare-eyed thrush of South America (*T. gymnophthalmus*).¹

¹ Seebohm and Sharpe, *Monograph of the Turdidæ*, 1902.

It is possible that this clucking or tchucking note is a primitive one common to the whole genus; it is, as far as my observation goes, the first to be used by fledgling thrushes and blackbirds in addition to their call-note *ptreep* or *ptrik!* Whether it also is used as a call-note I am not certain. Adult blackbirds and thrushes have, indeed, little occasion to use call-notes, except on migration, as they are not gregarious. The migrating call-note of the song-thrush is, according to Naumann, *zipp!*

The *ptick!* and *mink!* have probably similar corresponding sounds in the language of the other species of the genus, but not enough is known at present to justify any attempt to draw a comparison.

The blackbird differs from the song-thrush in the possession of its very remarkable alarm rattle, which it utters generally when disturbed into flight, reserving the *mink!* and *tchuck!* for occasions when it is engaged in keeping watch on the movements of an enemy, cat, dog, or other. The typical rattle consists of the *tchuck!* and the high pitched *weet!* to which reference has already been made. These are uttered in a variety of combinations, the most usual perhaps being:—*Tchuck! tchuck! tchuck! tchuck! to-weet-a-weet! to-weet-a-weet! tchuck! tchuck!* It is into the middle sounds that the bird puts that tone of almost frenzied alarm, which appears to give him a satisfaction that certainly is not always shared by his human hearers, especially if they happen to be bent on observation or slaughter, and therefore anxious not to arouse the suspicions of the furred or feathered folk.

Into the rattle there doubtless occasionally enter other notes, but these are probably for the most part imitated from different species. Both the blackbird and the thrush are good mimics. I have heard the former, when following up the movements of a cat on the prowl, add to its *tchuck!* the long-drawn plaintive alarm-note of the robin. The thrush is said to introduce imitated notes into its song.

Apart from a kind of almost indescribable squeak or squeal that I have heard from the beak of a thrush before roosting, and that is probably uttered also by the blackbird, the only other notes I have heard so far in the case of these species is the loud clamour set up when they are caught. This, according to Naumann, is common to all the Thrushes that form the subject of this chapter.

Not much can be said of the notes of the mistle-thrush. Its harsh alarm-notes are familiar, and have been compared to the sound produced by running a piece of wood over a comb. The redwing's call-notes are a soft *twip!* and the harsher *tchik!* The latter is probably also an alarm note. Naumann gives it an additional note, *sherk!* used when alarmed and when fighting. On migration it is a noisy species, whether flying by day or night, the note, according to Mr. A. H. Patterson, being "a sharp grating *s-you!*" The fieldfare's notes have been referred to on p. 366. Mr. Abel Chapman¹ states that on migration it utters "a low single pipe, quite different from the ordinary note." The ring-ouzel, again according to Naumann, has "besides the *tac!*" an additional note to express more intense anxiety or anger which he syllables as *wick!* or *griek!* and which in moments of excitement is uttered in rapid succession, as is also the more common *tac!*²

All these species, including the thrush and blackbird, have possibly notes uttered only in the breeding season. Of them we shall know more when the thrushes find their philologist, some one with patience and a fine ear, and, last but not least, time at his disposal to undertake what can only be a labour of love, though not love's labour lost.

¹ *Bird Life of the Borders*, 2nd edit., p. 7.

² *Vögel Mitteleuropas*, i. p. 168.

THE WHEATEAR

[E. L. TURNER]

The wheatear derives its name from two Anglo-Saxon words meaning "white-rump." It is one of the few small birds which can easily be distinguished when flying, by the broad white band above the tail, other notable examples being the bullfinch, brambling, and house-martin. It is sometimes locally called the stonechat, and indeed has more right to that name than the stonechat itself; for it is generally found in rough lands, stony places, bare patches on the downs, or in the vicinity of sandhills, especially in the neighbourhood of rabbit-warrens. It loves hills, and may be met with high up our mountain-sides where bird life is scarce.

The wheatear is a summer migrant, arriving in the spring and departing in the autumn. But some individuals appear to remain in our southernmost counties all the year round. Mr. W. H. Hudson met with the bird at Land's End on December 3, 1905. Gilbert White frequently mentions them during the winter months, and believed some few individuals were resident with us, an opinion which is gaining ground amongst later ornithologists. Personally I have not met with them later than October. Whilst in Edinburgh I saw a pair on Arthur's Seat several days in succession towards the end of that month. They were the only specimens of small bird life visible, and seemed as pleased with my company as I was with theirs—flitting from rock to rock ahead of me almost to the summit, where I lost sight of them as they flew towards Salisbury Crags. This habit of theirs of alighting on a stone or rough clod, incessantly bowing and calling "*chack*" "*chack*," then flying to another slight eminence and repeating these courtesies, is very alluring, especially as the places frequented by wheatears are so often devoid of other bird life; except indeed, on the South Downs, where they are fairly common during the breeding season, although in that locality

the habitat of one pair will generally be a considerable distance from that of another.

Wheatears are no longer caught in vast quantities on the Downs as they were in Gilbert White's time, when, as he quaintly says, they "appeared at the tables of all the gentry that entertained with any degree of elegance." The Bird Protection Acts have to some extent interfered with their capture, and in these strenuous days farmers have other work for their shepherds than the setting of horse-hair nooses to entrap wheatears. Also it is an undoubted fact, they are less numerous now than a hundred years ago. Their food consists of flies, which they often hawk for in mid-air, worms, and small mollusca. There is a tiny univalve that swarms amongst the blades of the short, juicy Southdown grass; and locally these form a considerable article of the adult wheatear's diet. Sheep also must devour quantities of these mollusca as they crop the herbage, and indeed are said by some to owe the delicacy of their flavour to this mixture of "snails" and grass!

As they move rapidly over the ground, these birds seem to run, but in reality they hop. When hawking for flies they spring into the air, generally from some slight eminence, but also from the ground—twist and turn with surprising agility, drop on to a stone, peer about for prey after the manner of robins, and, again rising into the air, they hover for an instant, then descend aslant towards their victims.

When flying they seldom rise high above the ground, a habit in a measure protective; for when flitting over a bare stony down, the colours of the wheatear's plumage are hardly distinguishable from the flints; but if seen on the sky-line, the black and white, especially of the male bird, is at once conspicuous. Always active and restless, these birds, more than any others, seem to have solved the problem of perpetual motion. Wheatears, perhaps more than most birds, are by nature of their habitat exposed to birds of prey. When pursued, both young and old take refuge in holes, especially

where stone walls divide fields; they will also disappear down short drains, emerge from the other side and flit away.

Their love antics are incomprehensible! At that particular season of the year when most birds run riot, the wheatear seems positively drunk with the joy of life. He hurls himself into the air, apparently turns a somersault, but in reality does not; dances, rushes at a rival, and occasionally fights, but as often as not, having thrown down the gauntlet, retires from the fray. I recently watched two males—rivals for the heart of a female who was discreetly flitting about, awaiting the result. They made little short rushes at each other, but did not actually come to blows. One bird continually flung himself into the air and sang gaily, then descended with curved tail like a tree-pipit; but the other hopped round and round the hen, bowing low, and gesticulating, as much as to say, "See, madam, in me you behold the finished gentleman; yonder fellow is but a strolling musician, I am a man of parts." This one eventually went off with the lady, whilst the rejected singer retired—still singing, with an air of—

"If she be not fair for me
What care I how fair she be."

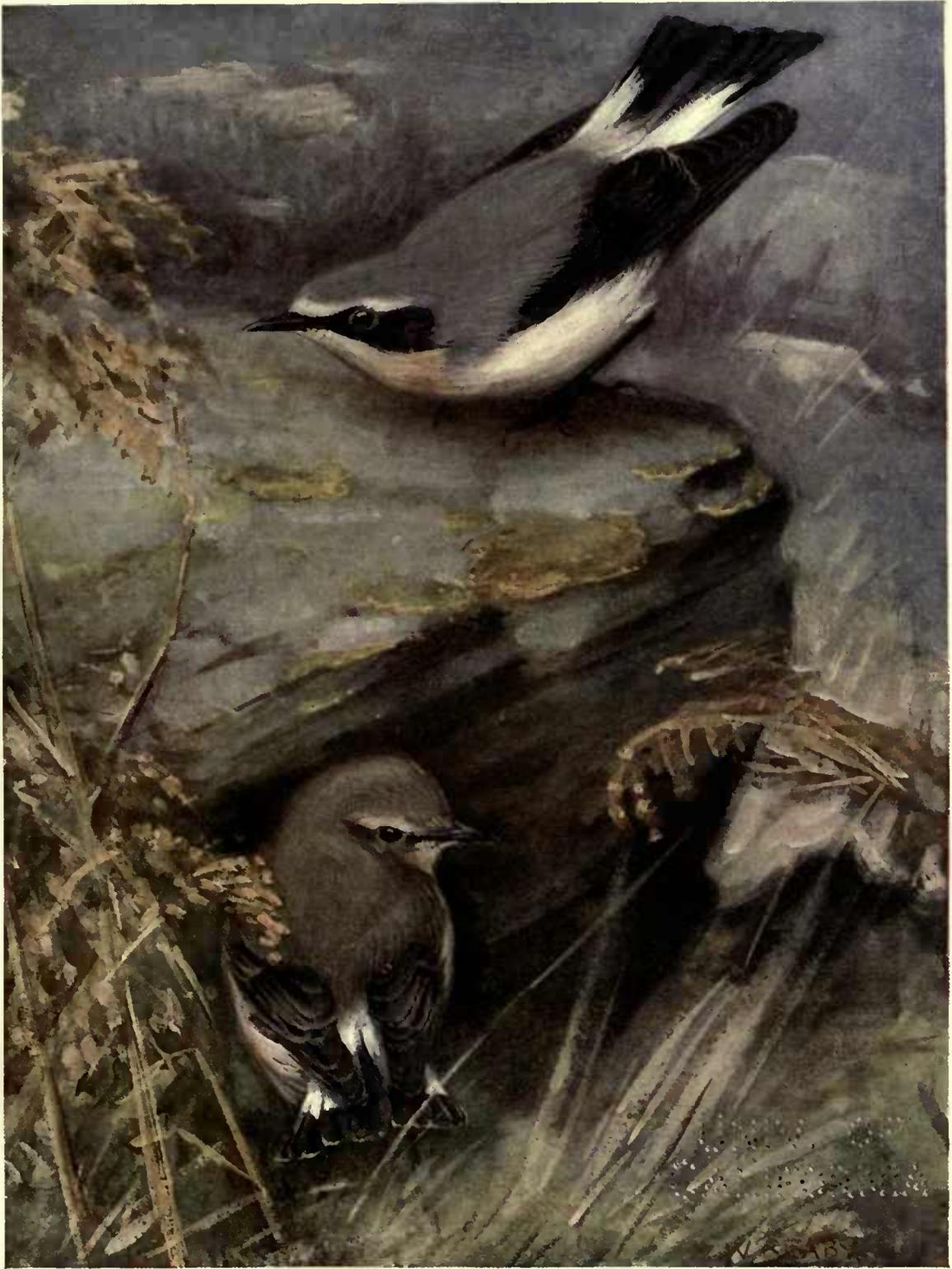
Maybe he had his art to console him; besides—were there not others as fair, to be wooed and won? A carrion-crow came flapping slowly above him, darkening the sky with sinister omen. The wheatear was not so deeply wounded in his affections as to court death, but hid for a time in a thick thorn bush. That danger past, out he came again and began to pour forth his joyous little song—so much fuller and sweeter than that of the Chat's, and resembling a skylark's in its beginnings. The pair of lovers reappeared shortly, and the rejected one again thought to impress the lady with his vocal prowess, but as she continued deaf, finally took himself right away over the edge of the hill.

The next day, April 11, I watched another pair, but they had evi-

Plate 40

Cock wheatear (upper bird) courting hen

By A. W. Seaby



dently settled the preliminaries, and were engaged in house-hunting. The hen was busily inspecting one rabbit-hole after another, but whenever she paused, or turned to consult her mate, he threw himself into various poses each of which was calculated to show his perfections to great advantage. He would rise into the air some distance, then drop like a stone within a hairsbreadth of the ground, much after the manner of an ecstatic lapwing. When this display of daring ceased to impress, he would hop round her, suddenly turn his back and spread out his tail feathers so that the white parts were brought into view.

In watching the "display" of male birds in general, one cannot help wondering what special feature in any given bird of one species should finally attract the female. A perfectly useless question to ask where human beings are concerned, although in their case there seems more variety both as regards beauty and temperament. But take the case of the wheatear. To the human observer one is exactly like another, and out of a whole regiment of them, arrayed in exactly the same uniform, it would be difficult to select one and say, "This is the most finished specimen." Does the hen bird after all look for something in her suitor apart from mere blandishments and outward show? Who knows? Those who are unsympathetic with animal life deny it reason, or power of choice. But we, who live day after day alone with wild nature, know how absolutely one bird of the same species may differ from another, in courage, parental affection, and temperament. This must be still more apparent to birds themselves, amongst which—as indeed amongst all animals—thought-transference is an undoubted means of communication, and speech unnecessary. It is we who are "dumb," not they. Therefore the hen birds in selecting their mates may, after all, be guided by a discernment of the real character of the husbands they choose, and all this "display" of the males, besides showing off their exterior advantages, may unconsciously reveal to the females little traits of disposition which assist her in her final choice. But we have no key to the inmost workings of a bird's mind.

“Birds, companions, more unknown,
 Live beside us, but alone;
 Finding not, do all they can,
 Passage from their soul to man.”

The wheatear usually builds its nest in a disused rabbit-burrow, but is not by any means tied by convention in the choice of a site. Dr. N. F. Ticehurst mentions a nest with eggs which he found built, like that of a stonechat, amongst the roots of a tall gorse bush; he also draws attention to Mr Boyd Alexander's statement, that occasionally nests may be found in a depression on the bare beach, and in this case dry grass alone is used as a nesting material, the usual feather lining being absent.¹ A pair once built under a target which had not been used for some time, but *over* which hundreds of bullets were fired daily, by men belonging to the Hythe School of Musketry.² Another nest was discovered in the axle of a wheel leaning against a marker's butt.³

There is a remarkable instance on record of two wheatears laying in one nest. This must have been the case, as the number of eggs deposited was doubled each day. But unfortunately the nest came to grief before either parent began to brood.

Dr. H. L. Saxby gives a detailed account of a curious dual nesting-site which he discovered and described minutely. I quote his observations in full—

“The nesting habits of the wheatear are so full of varied interest as to afford unceasing pleasure to the observer. One of the most curious departures from ordinary rule came under my notice early in June 1863. At the edge of a deep burn upon the hillside a long strip of turf had given way, and, resting against the steep bank had thus formed a kind of tunnel about a yard in length. So tempting a situation for a nest had attracted the notice of two pairs of wheatears, which instead of settling the question of ownership sparrow-fashion, peaceably built their nests side by side within six inches of each other. Each nest contained six eggs, all of which were hatched within the

¹ *Birds of Kent*, 1910, p. 17. ² *Field*, 1889, vol. lxxvii., p. 706. ³ *Field*, 1869, vol. xxxiii., p. 413.

same week, and in due time both broods were fledged. Although one brood left the nest somewhat earlier than the other, it remained in the immediate neighbourhood long afterwards, accompanied by the parents, which fed them industriously for at least twenty hours out of the twenty-four. The younger brood soon rejoined their neighbours, and at about eleven o'clock every night the whole party, numbering sixteen, retired to crevices beneath the large stones ;—at least I suppose so, for although I was never able to discover the young birds in their retreat, the slightest noise was sufficient to call forth the old ones. But after this had occurred three or four times, they were never to be taken by surprise, and were always to be seen flitting restlessly about as soon as I approached sufficiently near to distinguish them. Both ends of the tunnel were used for the purposes of entrance and exit, but I had no means of ascertaining whether each pair of birds kept to its own nest.”¹

A lady told me she found twenty-seven nests in Wales during the summer of 1908, each of which had two upright stalks of bracken before the entrance. One would like to know the origin of this curious habit, and also why the wheatear, unlike the Chats, should choose a tunnel in which to rear its young, rather than the open ground. Perhaps the bracken-stalks are explained by the fact that birds like a good landmark near the nest. Yellow wagtails, whinchats, corn-buntings, when nesting in meadows, generally choose a spot near some prominent plant which catches the eye and also provides a perch. In colour the female closely resembles the rabbit whose fur she uses to line her nest ; and in both sexes the white rump, visible only whilst flying, or when displaying the tail, is curiously like the white “scut” of a rabbit.

As a rule both birds assist in building the nest, but sometimes the hen does most of this work, while her mate merely accompanies her to and fro, as if his protecting presence were indispensable. Both birds take turns in incubating and also in feeding the young, but if a camera has to be faced, I have always found the female the more courageous,

¹ Saxby, *Birds of Shetland*, p. 71.

for although I tried several pairs this year, the hens alone brought food to the nest, the males diligently sought for it and supplied their helpmates, but could not be persuaded to face the camera. Mr. Farren's experiences were the exact opposite of my own, for he tells me that when photographing a pair at their nest, he counted thirty-two visits by the male, and one by the female. Some of these nests might be entered, or escaped from by various doors, and it was only by stopping up their emergency exits that the old birds could be induced to make use of one only. The wheatear's display of anger at this desecration of the domestic hearth was pretty to see. Standing on a clod in the bright sunshine, she rapidly spread out her tail fan-wise and scolded, both before and after feeding the young. Now and again she would return with a brilliant scarlet and black cinnabar moth; then the striking contrast between the sober browns and greys of the bird and the gorgeous tints of the moth made one of those splashes of colour it takes a lifetime to efface from the memory.

The food supplied to the young consisted mainly of caterpillars, spiders and moths; all of which seemed to require a great deal of banging on the hard ground before they were considered suitable for the infantile digestion. The old bird would stand a few feet from the entrance hole, and for the space of half a minute proceed to pound the unhappy insect or larva into a veritable jelly.

A writer in the *Field* makes the following statement with regard to a captive wheatear:—"Amongst insect-eating birds, I have a caged wheatear that disgorges in pellets the less digestible portions of its food. I send some of the pellets which I picked up in the cage. The bird has been fed during the whole winter on meal-worms and pupæ of ants, mixed up with a little grated carrot. He also takes kindly to cockroaches, which he devours greedily."¹ Perhaps the pulping of food supplied to nestling wheatears in some way assists digestion and saves the young birds the trouble of disgorging pellets. I have seen mistle-thrushes pound hairy caterpillars in the same way,

¹ The *Field*, 1886, vol. lxxvii., p. 400 (Peter Inghald, Harrogate).

literally turning them inside out, before administering them to their young—the only bird besides the cuckoo I have ever seen take these caterpillars. This habit of casting pellets is common to many species of birds, including shrikes and kingfishers, as well as birds of prey.

In the north of England and Scotland the wheatear bears a bad reputation, and is considered a bird of ill omen. Should it be seen sitting upon a stone, the death of the spectator will ensue; but good luck may be expected if it is perched on a tuft of grass. Poor, innocent beautiful bird! Could anything be less suggestive of death and disaster than this aggressively cheerful Mark Tapley of the bird world! The tradition is explained rather ingeniously in Swainson's *Folk Lore*. The wheatear's haunts and habits have earned for it a bad name. Naturally a bird of waste places, it frequents old and disused churchyards, cairns and mounds, beneath which lie the bones of men who perished ages ago, hence the ignorant and superstitious connect it with death.¹

The wheatear is an accomplished mimic, and can weave into his song not only the call-notes of other birds, but short phrases from their repertoire, so that even the most practised ear may be deceived, and mistake this plagiarist for anything but what he really is.² Saxby says he has heard the wheatear successfully imitate the "house-sparrow, skylark, common bunting, mountain linnnet, peewit, golden plover, ringed-plover, redshank, oyster-catcher and herring-gull." He goes on to say "So complete is the deception, that when the bird has been out of sight I have many times been thoroughly taken in."

To my mind there is always much in the song proper of the wheatear which suggests that of the skylark in its beginnings.

Comparing the songs of the Chats and wheatear, the simplest is that of the stonechat; it becomes more complex in the whinchat, but only attains its full expression in the wheatear, whose voice is flexible and capable of such varied modulation. Maybe it gains

¹ Swainson, 1885, p. 10.

² *Birds of Shetland*, p. 68.

an added charm from the fact that places where the wheatear sings are so often bleak and desolate, consequently the song is heard to fuller advantage when not overpowered by other members of nature's great choir. The newly hatched young only emit a feeble squeak. The call-note of the adult birds *t'chach*, *t'chach*, not unlike that of the stonechats, changes to *weet t'chach* when alarmed, and especially if their fears for the safety of the young are roused. Perhaps the change of syllable is a warning cry, and perfectly understood by the nestlings as such.

As the young wheatears advance in life, they too utter this faint syllable *weet*, *weet*, but do not acquire the *t'chach* till well on the wing. Another proof that all young things have to go to school, and exercise themselves in "the arts," as well as in the science of life.

One brood of nestlings I watched hatched out on 8th May, and on 19th May could run from the entrance of the rabbit-hole near which they were crouching when I peeped in. They moved fast, in the usual shuffling way of very young birds,—something between a hop, and a run, and a flutter of wings; but at the alarm-cry of their parents they crouched in a sandy depression, or tuft of rank grass till danger seemed over. On June 1st this same brood was flying about earning a partially independent livelihood.

As time goes on the various broods collect in flocks, and roam from place to place till about harvest-time, when they are "exceedingly fat and well liking." It was these young well-fed broods of wheatears which used to be caught in such vast quantities between Lewes and Eastbourne, and served up as a delicacy at the feasts of the wealthy.

There is a local race, or sub-species of this bird, known as the Greenland wheatear, which passes through the whole of Great Britain on migration. It is distinguished from the common race by its larger size, and deep reddish-buff throat and breast. It generally arrives in the North of England during the last week in April and the first

week in May, and continues passing through till the end of that month. The return journey usually takes place during the latter half of September.

On a cool, crisp September morning, during the second week of this month, I have seen the sand-dunes on the east coast alive with Greenland-wheatears, eagerly in quest of food, which they search for at low tide on the edges of mud flats, or amongst the coarse herbage of the dunes. They may remain a few hours, or most of the day, before continuing their journey south. Perhaps the fact that their breeding-places are in high northern latitudes, where the Arctic summer-day consists of from twenty to twenty-two hours, and the consequent extension of their feeding-time, may account for the larger size and increased brilliancy of this race.

THE STONECHAT AND WHINCHAT

[E. L. TURNER]

On our furze and heather-clad commons the two chats, though local in their distribution, are by no means rare, but the stonechat¹ is most readily seen, because the cock is a conspicuous object as he stands on the highest point of some gorse bush defiant in attitude, resplendent in ruddy chestnut waistcoat, immaculate white collar, and black cap; there, with scolding call-note and angry jerkings of his tail, he protests vigorously against the sin of prying curiosity which induces unwelcome visitors to search for the carefully hidden nest it has been the one aim and object of himself and his more soberly attired mate to screen from public view.

He seldom flies to any distance, but flits from bush to bush, alighting daintily on the topmost twig, which sways and looks as if it

¹ The name "stonechat" is misleading, and suggests bare desert places, whereas this bird's favourite habitat is in heather and gorse-clad commons; but it really owes this name to the similarity of its alarm-note to the striking together of two pebbles.

could not possibly bear the weight of this stout-looking bird, so aldermanic in proportions when compared with the slim elegance of the whinchat. But "he hath a leg"; strong, slender, and elegant; supple and springy withal, which in spite of his corpulence gives him the air of being the best set up bird in creation; a fact of which he is quite conscious, as he is also of his brilliant uniform. Perhaps the stonechat's tail is his most expressive feature—if such a term can be applied to a mere appendage. It is almost as emotional as a dog's, and his angry "*t'chat t'chat*," too, is not unlike the short, sharp bark of a ruffled terrier.

From his manner of greeting you, and the obvious displeasure evinced by the jerking of his tail, one might suppose the stonechat to be really bad-tempered. In some parts of the Highlands, indeed, his nest is left unmolested from fear of his curse, which runs as follows:—

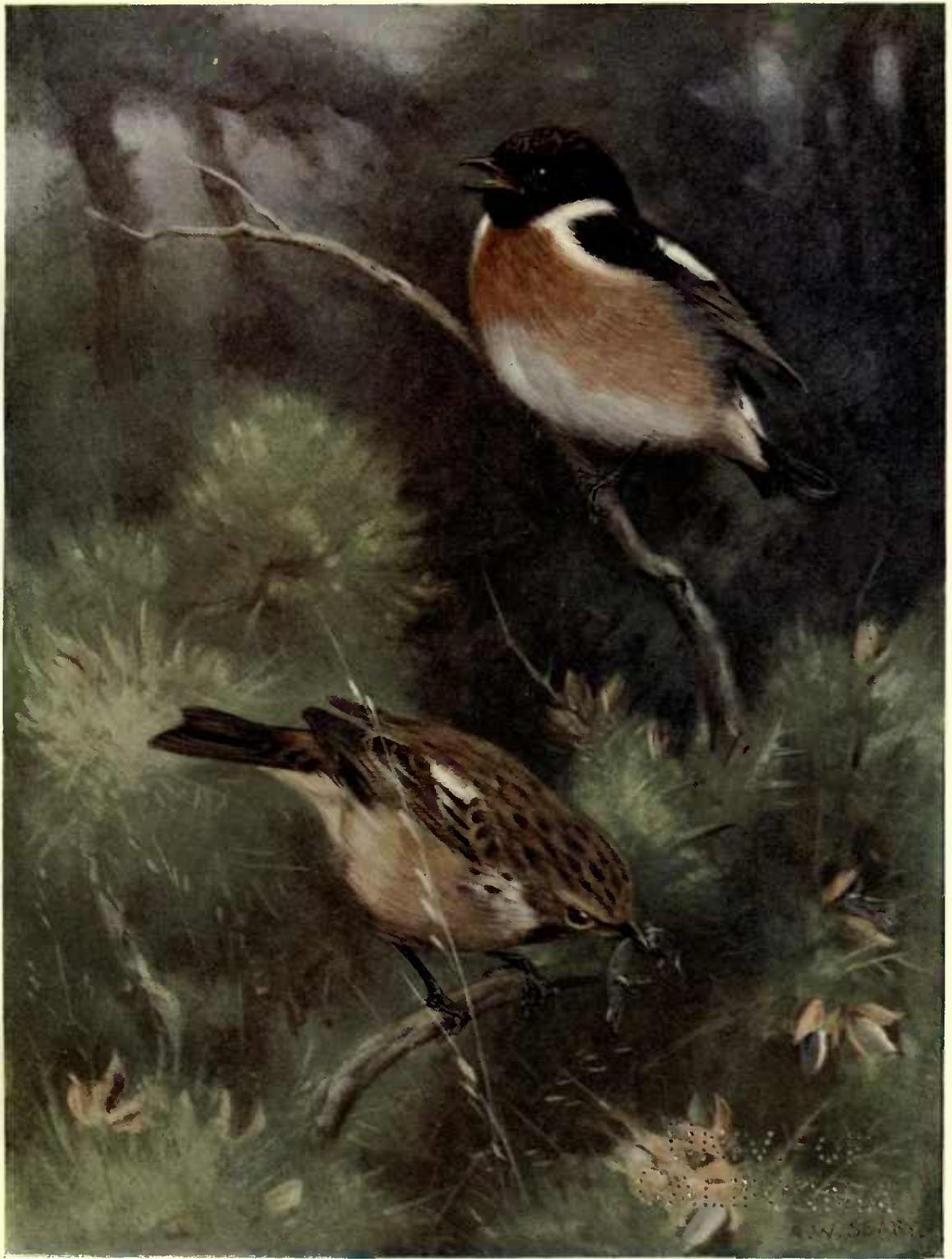
"Stane chack!
Deevil tak!
They who harry my nest
Will never rest,
Will meet the pest.
Deil break their lang back
Wha my eggs wad 'tak' 'tak.'"

In reality the bird is only a trifle irascible, and given to speaking his mind. Provided one does not intrude too closely he will become quite affable and entertain you by hawking for flies in a really clever and inspiriting manner, considering his size and shape. But if you persist in following him unasked to his own door, then, indeed, his rage is unbounded and his language coarse! One day, having planted my offending self and camera within a few feet of a stonechat's nest, finding their excited efforts at dislodging me by mere invective quite useless, the birds resorted to various feints in order to accomplish this desired end, and at last went so far as to sham feeding an imaginary brood some distance away. Each collected food, and dropping down into the same spot time after time, flew away with

Plate 41

Stonechats, cock singing, and hen with
a small lizard in her beak

By A. W. Seaby



empty bills, every now and again pausing to hover for a moment over their real family, and utter a warning cry. They kept up this ruse for about half an hour, but at last the anxiety of the female overcame caution and she slipped back to her brood through the undergrowth of bracken and briar, by secret and winding paths, in a manner that would have misled me as to the whereabouts of the nest, had I not already been in possession of the secret.¹ The male also soon gave up all pretence at concealment, and alighting boldly on a twig above the nest, settled down to the business of feeding the now hungry brood with great energy. There were two tall points of gorse above the nest, and almost invariably the male alighted on one, and the female on the other when bringing food, and thence dropped down to the young ones; having fed them, they flew up on to the twigs again, where they paused a moment before flying away.²

In spite of my presence, for I made no effort at concealment, the parents came on an average twice a minute, with a varied assortment of dainties, consisting of gnats, flies, succulent spiders and caterpillars. On more than one occasion an unfortunate and squirming young lizard was brought by the cock bird for the young stonechats' meal. Mr. Farren, in an article recording his experiences in photographing a pair of stonechats, noted that the female always brought a spider as her contribution towards the *menu*, and the male a caterpillar; but my pair provided a much more liberal diet for their family.

As I settled down to my work of photographing at 4.30 A.M., and remained for various periods of from four to eight hours several days in succession, I could not help thinking how insupportable life would become if there were no birds to rid us of insect and other pests! Sometimes I moved away and watched the parent birds through my field glasses. Then they returned three and sometimes four times a minute, often with several insects in one mouthful; so that stonechats

¹ The ruse here described was also noted in the case of the whinchat by J. B. Bailly, in his *Ornithologie de la Savoie*, vol. ii. 1853.

² For similar facts see p. 330.

amongst other birds must confer inestimable benefits on the agriculturist. Mr. Farren, in the paper quoted above, also timed his pair of birds, and found that they fed the young at least twenty times in fifty minutes. My own experience in bird photography tends to prove that all birds are less shy, and more intent on supplying the needs of a clamorous brood between the hours of four and eight A.M.; afterwards there is a lull, during which the female broods over the young, especially during the earlier stages of their growth; the male too relaxes his efforts for an hour or two, after which both set to work again vigorously till the noontide heat compels the female again to shelter the young.

The hen stonechat sits very close when incubating, and unless one can actually flush her from the nest many hours will be spent in searching for the eggs. Even then she seldom flies straight off, but creeps through the tangled bushes till well away from the actual spot where her treasure is concealed. In England two broods are reared in the season, but Macgillivray was unable to discover whether or not this was the case in Scotland. When the young are hatched out the old proverb that "Handsome is as handsome does" is abundantly justified, for the male stonechat proves a good husband and father, tending the young—in the majority of cases with great solicitude—and fully displaying those qualities which are not invariably found blended with a handsome exterior and overbearing manners.

Compared with many Passerine birds—hedge-sparrows, for instance—the young stonechats are a long time before they leave the nest. During May 1909 I watched a nest daily, from the time the young were hatched till well able to take care of themselves. This particular nest was interesting, because the parents had broken away from tradition and built on the open marsh. The composition of the nest itself is worth recording. In addition to the usual materials—moss, dry grass and wool—it contained two bits of red worsted, a tuft of hare's fur, two moorhen's feathers, horsehair, and some yellowish woolly hair belonging to a foal that roamed this marsh, and whose

discarded covering was appropriated by sundry birds in the neighbourhood. The young were hatched on May 3rd, and did not leave the nest till May 16th, and even then they were not able to fly, but skulked in the long coarse grass till May 25th, which was the first day I actually saw them on the wing. They were still being fed by their parents during the first week in June.

The cock stonechat may be seen feeding his first family, and continuing their education in its higher branches, while the hen is brooding over the second clutch of eggs; so that in all probability he does not take much part in the actual incubation. This second brood is sometimes not on the wing till August, for I have seen a pair of old birds feeding young as late as August 5th.

Birds of the year apparently keep together, for during the autumn migration "young birds are usually reported, occasionally an old female, but adult males are scarce."¹ Probably, like the young of the human race, the society of those of their own age is more congenial than that of their elders.

Although considerable movement takes place amongst our home-bred stonechats during spring and autumn, it is impossible, with our present limited information on this subject, to say whether actual migration to and from abroad takes place. The spring and autumn migrations noted on the Yorkshire coast point in this direction, but may be explained by inland movements. Dr Hartert speaks of our British stonechat as mainly a resident bird, while on the Continent it is chiefly migratory.² Dr. N. F. Ticehurst says, "Their summer and winter distribution differ markedly from each other, and in the latter season the numbers are augmented by migrants from inland counties and more northern latitudes. Though there may be localities where stonechats are to be found all the year round, it does not in the least follow that these are the same individuals, and I very much question whether they are so."³

¹ *Birds of Yorkshire*, Neilson and Clark, 1907, p. 31.

² *British Birds*, vol. iii. p. 316. See "Classified Notes."

³ *Birds of Kent*, p. 21.

In the autumn they leave their inland breeding areas and retire to the coast. In my own neighbourhood they are seldom seen later than October, but twenty miles further south, between the Downs and the sea, I have seen them in the vicinity of farms and sheep-folds in company with gulls, starlings, pied-wagtails, and meadow-pipits diligently following the plough—rather lagging behind the larger birds, and flitting from clod to clod, hardly rising more than a few inches from the ground, so that they are difficult to detect unless you are really on the lookout for them, as they harmonise completely with the newly turned brown earth. I have seen, in one batch, fine adult males, immature males, and females, earning a livelihood by picking up what Hodge calls “wurrums!”—a fairly wide term, which may include anything that wriggles, crawls, or squirms. In the allotment gardens, and about the ploughed fields bordering our southern watering-places, they are fairly numerous all the winter; but their manners are more subdued and their general habits less aggressive than is the case when spring comes, and tear in shreds their “thread-bare Penitence.”

The whinchat differs from the stonechat in being exclusively a migrant, coming to this country in the spring to depart south in the autumn. Though not so brilliant as the stonechat, the plumage of the whinchat has a great charm of its own. It is really a very beautiful bird, elegant in shape, graceful in movement, and æsthetic in colouring. The broad eyestripe—white in the male, buff in the female—together with the exquisite blending of dark brown and buff markings on the head and back, make it very attractive-looking, and are also largely protective in colouring, for it is often difficult to follow the movements of a pair of whinchats on open heather and pasture lands, which they love to frequent. It would be quite easy to confuse the whinchats with the *female* stonechat, as all three are alike in general colouring to the inexperienced eye; but they differ considerably in shape and attitude. The jaunty air of the handsome male is reflected in the general bearing of

the hen stonechat: whereas the whinchats are both of slighter build.

They delight in gorse or "whin" bushes as the name suggests, but are equally fond of meadows; and, in common with many ground builders, often seek the comparative solitude of railway cuttings, where they are almost immune from the persecution of marauding boys. After the breeding season they make for the open fields, especially those planted with roots such as potatoes and carrots. An exceptionally rare case of an albino whinchat was met with on Salisbury Plain, in company with four normal birds of the same species, and noted in the *Field* of August 23, 1894. Although more evenly distributed than the stonechat, the whinchat often escapes observation owing to its retiring habits. As a rule, in districts where the one bird is common, the other will be less so. In spring the male whinchats arrive several days before the females, and may be seen on the south coast about the middle of April, but seldom reach the north till the end of that month.

Its nesting habits are similar to those of the stonechat. The nest itself is usually placed in a tuft of grass or rough undergrowth of some kind, and may be distinguished from the stonechat's by its lining, which generally consists of fine dry grasses; whereas the latter bird usually finishes off its nursery with hair, feathers, vegetable down, or wool. According to Naumann, the female alone incubates, though the mate is diligent in assisting his mate when feeding operations commence.

The food supplied to some nestlings I spent several days in watching consisted entirely of insects and their larvæ, including moths, which they frequently attempted to catch on the wing. Occasionally a surprised and irresolute nocturnal moth, blinded by the glare of a hot May morning, would afford the male whinchat considerable sport which did not always result in a successful capture, as the two turned and twisted in mid-air. Generally the parents would spy their prey from the vantage-ground of a twig or bush

and suddenly dart upon it after the manner of a robin, but a fluffy-bodied moth was not always to be caught napping, and unless actually speared by the bird's bill seemed to present considerable difficulties, till with torn wings it fluttered helplessly to the ground.

On the only occasion I ever photographed whinchats, I found them much more difficult to deal with than stonechats. But it is never safe to generalise from one particular instance. Individual birds, even of the same species, differ widely in temperament, and are as much subject to "nerve storm" as human beings. This particular pair of whinchats gave me a great deal of trouble. There was no cover near the nest, which was placed in a tuft of dry grass on an open heath, practically consisting of acres of similar dry grass, which gleamed like burnished copper beneath the broiling sun. The male bird only came to feed the young once during the four days of watching that my camera was in position, but the moment I removed it he flew regularly to and fro with food for the nestlings. However he did his duty in foraging, and supplied his mate with most of the dainties she herself administered to the family. He would alight on a twig some yards away, call her, hand over the supply, then go in search of more. Yet curiously enough, in spite of this nervousness, he often perched *on* the camera, and broke into full song, while examining every nook and cranny of my hiding-place. As this so often happens with male birds—especially amongst the warblers—I cannot help thinking that a bird's song is often expressive of alarm or intense excitement, as well as of the softer emotions. Only yesterday (April 29, 1909), while crouching behind some bushes in an osier-bed, for shelter during a storm of sleet and rain, a tiny willow-wren dropped down beside me with a beak full of feathers. Her mate alighted on a twig a few yards off, and with eyes fixed upon me burst into loud song; the notes were more shrill than usual, and the little final trill less plaintive.

There was another pair of whinchats nesting within a stone's-

Plate 42

Whinchats, cock singing, hen carrying grass
to her nest

By A. W. Seaby





throw of the birds I photographed, while away over the heather two stonechats were busily instructing their newly fledged brood in the art of living, for the resident stonechat is a far earlier breeder than the migrating whinchat. I wonder if the little whinchats feel very superior to the young stonechats, because *their* minds will certainly be further enlarged by foreign travel and education; or whether, on the other hand, the resident stonechats have an insular prejudice against foreign manners. In any case, though so similar in general habits, the two species never seem to "mix in society." But these are problems beyond our ken! In some districts the whinchat certainly rears two broods in the season; the second is often not seen about till August.

How the whinchat woos I do not know. Probably his method is like that of the stonechat. One April evening I came upon a pair of the latter chasing each other round and round some gorse bushes, hopping on the ground for the most part, or throwing themselves into the air. The male, with head stretched out, black cap raised, and quivering wings outspread—an attitude which displayed to full advantage the excellency of his clean white collar,—made sundry rapid dashes at the female. She flirted—I regret to record this fact, but she *did*, for, turning and twisting, with head coyly on one side, she lured him on, sometimes flying up to a twig and looking down at her lord prostrate at her feet; then hopping a short distance and looking round to see if she was followed. This seemed to exasperate the male bird, for he jerked his tail, quivered his wings more rapidly, and dashed boldly at the lady. She, in no wise daunted, rushed at him and inflicted various sharp pecks with her bill upon his head and neck, so that he was forced to beat a retreat into the bushes, where she followed; but soon both birds emerged, apparently on the best of terms. From this description it might be inferred that the female was the bolder and more courageous of the two, but evidently there was an air of assurance about her lover which took too much for granted—hence these rebuffs. Nevertheless all the time she

evinced considerable satisfaction at his handsome appearance and dashing manners.

The stonechat has three distinct notes, which are described by Naumann as follow: "The usual call is a clicking '*tza*,' which is also the note of the young, then a dis-syllabic '*st-tich*,' and in addition an alarm-note uttered when any one is near the nest." This alarm-note is the '*tchat*' we hear so frequently during the breeding season, and which is therefore so closely associated with the stonechat; occasionally it is preceded by a plaintive '*tr'weet*.'

The whinchat's call-note resembles the stonechat's—a short "*tza tza*," but when excited it utters a sharp "*u-tichi*," and as alarm increases the "*tichi*" is repeated three or four times accompanied by a jerking of the tail and a slight fluttering of the wings; this latter note generally indicates the presence of the nest.

The stonechat's short, crisp song is usually sung when the bird is perching, but sometimes also when he is on the wing, but I believe the flight-song is not so frequently indulged in after the early courting days are over. Mr. W. H. Hudson has minutely described this "song and dance." "To sing, the stonechat flies up almost vertically from his perch on the topmost spray of a bush, to a height of 40 or 50 to 100 feet, and at the highest point pours out a rapid series of double notes, the first clear and sharp, the next deeper and somewhat throaty, then the clear again, the sound rising and falling rhythmically, and as he sings he drops rapidly a distance of a couple of feet, then flutters up and drops again and again."¹ This song is beautiful, and quite unlike any other British species. Nevertheless the song is not vociferous. It may be heard before dawn and sometimes in the night. Towards the middle of June, when the young of the second brood are fledged, it ceases. Personally, I believe that when birds, which are not habitually night singers, burst into song at unwonted hours, it is because of some sudden alarm. When I have been sleeping out of doors, I have noticed that the

¹ *Nature in Downland*, p. 156.

prowling of some nocturnal animal or a startling noise will make any of our common birds break into a short song. Apart from this song proper, the stonechats, in common with most birds, have a "love language," which consists of low crooning notes, disjointed syllables which cannot be described. During the breeding season a great deal of conversation takes place between parent birds of all species concerning their young. Even non-singing birds have at their command a whole gamut of expression, and their usually harsh voices become capable of inflexions and modulations which the ordinary passer-by never hears. For birds are the most self-conscious of all wild things, and only reveal their real natures to the patient watcher whose presence in their vicinity is utterly unsuspected.

The whinchat's song is a short warble, often repeated, sometimes for half an hour at a stretch. The bird usually remains perched on a twig, or swaying to and fro on some umbelliferous plant, but sometimes he sings on the wing. He is never in a hurry like the stonechat or wheatear, though now and again he will break off in the middle of his song, dart into the air, seize some winged dainty, return to his perch and begin the song all over again. Few birds—if any—seem able to catch up a strain where it was broken off, but have to start afresh—a striking instance of conventionality in beings so erratic by nature.

THE REDSTARTS

[F. B. KIRKMAN]

Two species of redstarts visit our Isles, and matters are so arranged that one is with us in the summer, the other in the winter. The former, usually called the redstart, without any qualifying prefix, generally arrives on our shores when its congener, the black-redstart, or blackstart, is on its way back to foreign parts. Why the latter does not stay to breed with us is one of the puzzles of ornithology for it does so in numbers in certain localities in the same latitude, the valley of the Rhine for instance, where the physical features do not differ markedly from those in our own country. It is able to suit itself, moreover, to all temperatures. It is found in Switzerland, both down in the valleys and high up on the mountains. "Wherever," writes Mr. Warde Fowler, "there is a chalet under the eaves of which it can build, there it is to be found as soon as spring has begun to appear, even though the snow is lying all around. I have found it myself nesting in chalets before the herdsmen and cows have arrived there, and, at a height of six thousand feet or more, it has woke me at dawn with its song; yet at the same time it is abounding in the plains of France and Germany, and nowhere have I seen greater numbers than in the park at Luxembourg."¹

The black-redstart's liking for mountain slopes is one of the points wherein he differs from the redstart, which, though also seen in rocky places, is a more familiar sight in the woodland. Both are frequenters of gardens and orchards, but apparently for different reasons, which are implied in the names given the two species by the Germans, to whom the black-redstart is known as the *Hausrotschwanz*, and the other as the *Gartenrotschwanz*. The first is in the garden chiefly for the sake of the building, because he is content to consider a house, or a public building, or, let us say, a town,

¹ *A Year with the Birds*, 2nd edit., p. 58.

as a tolerably satisfactory substitute for a mountain; and the second because he recognises that a garden or orchard, in spite of man's meddlesome intrusion of the house, nevertheless has in it the essentials of good woodland. In this comparison there is no doubt a touch of exaggeration, but, all due reserves being made, it does correctly illustrate what is undoubtedly a characteristic difference in the habitat of the two species.

In the southern counties of England and Ireland the black-redstart is often to be found, from November to spring, in certain favoured localities, more particularly near quarries, on stone walls, among ruins or rocks, sometimes never more than a pair or so in the same place, sometimes in greater numbers,¹ but there is little or no regularity in their visits, or in the length of their stay. There they may be seen, behaving much in the nervous, restless manner of the robin, flitting here and there with many a quaint spasmodic bow and many a quiver of the ruddy tail, but withal wilder in their ways than robin or woodland redstart, so much so that they have been thought to resemble the wheatear more than either. Perhaps their surroundings have something to do with the impression they make, for in their summer haunts upon the Continent they seem to take almost the place of our robin. To quote again from Mr. Warde Fowler, writing of the Alps in June: "The little 'Rötél,' as they call him, is a great favourite with the Swiss peasantry; he is trustful and musical, and will sing sometimes when you are within a few feet of him. They are sorry to part with him in the autumn, and cannot make out what becomes of him."²

According to Gilbert White, our summer redstart "affects neighbourhoods and avoids solitudes, and loves to build in orchards and about houses."³ Personally I have seen him more often in the solitudes, if the outskirts of woods and forest glades, away from human habitations, may so be called. But however solitary the

¹ Cf. Ussher and Warren, *Birds of Ireland*; N. F. Ticehurst, *Birds of Kent*.

² *A Year with the Birds*, 2nd edit., p. 58.

³ Letter to Pennant, September 2, 1774.

spot, the sense of solitude ceases at sight of this little incarnation of all that is bright and cheerful. He comes, perhaps not like our first mother, with heaven in his eye, but yet at least with warm comfort glowing on his ruddy breast, with gloom dispelling light shining from the white star he bears upon his forehead, and with contagious good spirits radiating from his fiery-coloured, never-resting tail. Fire-tail he has been called, for his tail has in truth something of the likeness of a flame flickering among the leaves, whenever its chestnut hue catches the sun-gleams, or when, fanned to the full (as I have seen it), the light shines through it from above. His tail, indeed, has given him all the names he bears. The last syllable in "redstart" is itself nothing but good Anglo-Saxon for tail. Red-tail he is sometimes called, and also flirt-tail. To me, however, it has never seemed that "flirt" or "flick" rendered the reality. The tail, if closely watched,—and the same applies to the blackstart,—has all the appearance of being moved by the touch of an unseen finger-tip which sets it vibrating as if it were a spring. It vibrates, almost ceases, and then, lightly pressed, again vibrates, sometimes more, and sometimes less, according to the mood that sways its owner.

The redstart, like its fellow-species, reminds one frequently of the robin not only in its manner, its nervous movements, curtsies, its way of hopping on the ground when searching for its food, but also to an appreciable degree in its outward shape. If it were possible for a redstart to assume the coloration of a robin, it would not be easy for any but a practised eye to detect the disguise at first sight. The vibrating tail would of course soon betray it. And so also would its pretty habit of flitting from its perch after flies, setting the air alight with red flashes as it lightly turns this way and that to seize its prey. This it does, not occasionally like the robin, but frequently and regularly—a habit which it shares with the black-redstart. Both indeed are nearly, if not quite as expert as those past masters in this particular branch of the art, the Flycatchers (*Muscicapidæ*). Mr. Dresser states that on the Continent

Plate 43

Cock redstart (left) displaying before hen

By A. W. Seaby



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redstarts are often caught and let loose in a room to catch flies. One of these birds was watched for an hour, during which time it destroyed six hundred! In no remote future, when we learn to govern our relations with the birds more wisely than we do, fly-catchers and redstarts will perhaps take the place of fly-papers and fly-string. Why not? How much more agreeable it would be to have our most obnoxious household pests cleanly and neatly disposed of by sylph-like creatures flitting over our heads about our rooms, than to see them perishing slowly in sticky crawling clusters! ¹

In the case of the Redstarts, as of most other species, the cocks arrive each April on our shores some days in advance of the hens. The reason for this is by no means clear; it is a problem to which we shall revert in a later chapter.² Each cock returns probably, in some cases certainly, to the place where he nested in the previous summer. What occurs in the case of young birds about to breed for the first time is not yet known, and it would be of great interest to ascertain whether they return to the place of their birth, and, if so, what their relations are to one another and their parents. Certain it is, that when once a cock Redstart has selected the site for his nest, he permits no other of his species except his mate to approach it within a certain distance.

I have not seen, and can find no record of, the redstart's love displays beyond the fact that, as shown in Mr. Seaby's drawing, he droops his wings and spreads to the full the ruddy glories of his tail, moving it often from side to side, after the manner of the redbacked-shrike. The black-redstart behaves in much the same way. According to Bailly, he begins by saluting the object of his affections with a few faint notes, *plein de douceur*, it is true, but timid and restrained. After this cautious prelude, which is not unfavourably received, he plucks up courage, repeats his notes, uttering them with greater

¹ Dresser and Sharpe, *Birds of Europe*.

² A French ornithologist, Dr. Gromier, states that in the case of every migrating French species he found that the first arrivals are males, followed by males and females, the last arrivals being females only. No doubt each male precedes the female with which he is paired (*Revue Française d'Ornithologie*, 2^e Année, p. 253).

feeling and vivacity, curtsying the while, and moving his tail, not up and down, but, like the redstart, horizontally from right to left and left to right. This ritual he has to perform each succeeding spring, whether the fair one is his mate of the previous year or another; that is, unless, the redstart, which is most unlikely, proves an exception to the general rule. He performs it whether there is a rival or not, and continues to perform it after the lady has been won; for example, according to Bailly, whenever he brings to her some offering, a juicy grub or lively fly, as she sits incubating in her nest. Birds in love appear, indeed, to display merely because they cannot help doing so; their feelings demand an outlet in some form of violent effort. The form adopted varies somewhat from species to species for reasons which have yet to be determined.

The song of the Redstarts is far from reaching the same degree of beauty as their coloration. That of the redstart, such as it is, has been well described by Mr. W. H. Hudson, as follows:—"It is impossible to listen for any length of time to the redstart, and to many redstarts, without feeling, and almost with irritation, that its strain is only the prelude of a song—a promise never performed; that once upon a time in the remote past it was a sweet, copious, and varied singer, and that only a fragment of its melody now remains. The opening rapidly warbled notes are so charming that the attention is instantly attracted by them. They are composed of two sounds, both beautiful—the bright, pure, gushing, robin-like note, and the more tender, expressive, swallow-like note. And that is all; the song scarcely begins before it ends or collapses, for in most cases the pure sweet opening strain is followed by a curious little farrago of gurgling and squeaking sounds, and little fragments of varied notes, often so low as to be audible only at a few yards' distance."¹ Let us add that this song, which is curiously like that of the pied-flycatcher, a bird of somewhat similar habits, is often uttered when the redstart is on the wing, hovering, or flying from tree to tree.

¹ *Afoot in England*, p. 196.

I have not heard the song of the black-redstart. According to Naumann it is not unlike that of the redstart, but less pleasant to hear, and marred by certain harsh or hissing notes. It has three phrases. The first he syllables as "*Tsia tsissississississ.*" Of the third he says nothing. The middle one contains the harsh notes, and upon it he makes a most unfeeling comment.¹ Speaking presumably of the same notes, Bailly compares them to the noise of very small pebbles rolling down the side of a rock. The bird itself is conscious of no defects in its performance; it is one of the most diligent of songsters, and seeks the highest point it can find from which to pour forth its singular melody. And there are others who are as fond of it as he. To the ear of the Swiss peasant the *Rötling's* notes make sweet music, for they herald the spring. He welcomes the sound as do we each year the advent of the first swallow.

The redstart builds its nest as a rule in a hole.² I have found one on the ground in an old deserted gravel-pit inside a wood. It lay at the end of a tunnel that ran under an overarching tangle of dead bracken and larch twigs. The parents betrayed its position by going each in turn frequently to it with grubs for the young. As I sat and watched, I became aware of a grating noise near by, like that of many little files scraping on a bar of iron. The tune they scraped never ceased, and at times it rose, becoming fast and furious, a most unusual sound to hear in such a place. As I continued to listen and wonder, it struck me that the moments of acceleration corresponded to the visits of the redstarts to their nest. The files were, in fact, seven young redstarts singing the song of the Succulent Grub. And a merry song it was.

Wishing to have a photograph of the parents at the nest, I slung my mackintosh over my tripod, thrust a few brackens into the

¹ "Die mittlere Strophe hat so wunderbar gepresste Töne, dass es klingt als wolle der Vogel vomieren."—*Vögel Mitteleuropas*, i. 56. C. G. Beauchamp (*Field*, Nov. 5, 1910) writes that the song "starts with two high-pitched notes—not to say squeaks,—then follows a rough, rasping *chr-r-r-awk*, while the *finale* is a rather soft *see-tsu-tsee*. The whole song is uttered rapidly."

² Both species also usually roost in holes.

button-holes, sat myself under it with the camera on my knees, and waited. In less than ten minutes the cock was perched before the entrance to the nest. I touched the release, but alas! the shutter of my camera, one of those euphemistically described in the "trade" as "silent," broke the peaceful silence of the wood with the noise of an avalanche rushing down an Alp. I secured, it is true, a poor photograph of the cock, but the young were there and then all scared from the nest, and my opportunity destroyed. There was nothing for it but to fold my tent, like the Arab, and silently steal away.

The two redstarts are not unlike in their nesting habits, except that the black species is found breeding, as already noted, at higher levels, and is much more partial to human habitations. On the Continent his nest is often to be found in the middle of towns. The males of both appear to take some share in incubation and nest-building, the practice of individual birds possibly varying.¹ They certainly assist in feeding the young, and, if the hen happens to be killed, the cock will take upon himself the whole task. A good example of this is given by Keller. As he sat watching a pair of black-redstarts feed their young, these being two days' old, a sparrowhawk swooped down, and seized the little hen in his talons. Keller could think of nothing better than to hurl his note-book at the intruder, who thereupon dropped its victim, which fell to the ground, where, after one or two convulsive movements, it lay quite lifeless. The cock flew about in the greatest distress uttering his call-note. Next day, however, he was busy feeding his young. He continued to do so, day after day, early and late, on an average fifteen times an hour, bringing two to three grubs to the nest each time. When the young were fledged, he led them away into the trees and bushes, and continued to satisfy their hunger for several days until able to look after themselves.²

Both species usually rear from one to two broods in the year, and

¹ See the "Classified Notes."

² *Vögel Kärntens*, p. 107.

Plate 44

1. Black-redstarts on the ground, the nearer
bird being the cock
2. Redspotted-bluthroats on twig, the further
bird being the cock

By A. W. Seaby



Naumann states that the redstart never nests twice a year in the same hole, but will in the following year nest again in either, and continue to do so for many years.¹ Mr. Jourdain tells me that blackstarts' holes may also be occupied year after year.²

A good many instances are on record in which redstart's eggs have been found with those of other species in the same nest. Among these are the blue-tit (*Parus caeruleus*), great-tit (*P. major*), robin (*Erithacus rubecula*), and pied-flycatcher (*Muscicapa atricapilla*). This joint establishment seems to point to a kind of parasitism in the case of the pair which does not build the nest, and is possibly due, at least in the case of the Tits, to scarcity of nesting-holes; but it is singular that the pair in possession do not resist. Perhaps they do and have to yield. Whatever be the beginning of the joint undertaking, its ending is nearly always the ejection of the redstarts.³

The alarm-notes of the redstart are a soft "*ptui*," resembling that of the willow-wren and chiff-chaff, and a sharp "*tick*," not unlike a similar note uttered by the robin, but less hard. In moments of excitement the "*ticks*" are rapidly repeated. The notes of the black-redstart are much the same, but, according to Naumann, higher pitched and more strident. As in the case of its fellow-species, its "*ticks*" become more frequent and rapid the more it has cause for alarm.

It will have been observed that both in their appearance, their manner, and their notes, the redstarts have much in common with the robin. It has, as we shall presently see, something also in common with the species that forms the subject of the next section.

¹ *Vögel Mitteleuropas*, i. p. 64.

² C. G. Beauchamp notes, in the case of the blackstart, that "a second nest will be built and eggs laid even while the first brood is still being fed" (*Field*, Nov. 5, 1910).

³ See notes by F. C. R. Jourdain and H. R. Tutt in *British Birds*, iv. 77.

THE REDSPOTTED-BLUETHROAT

[F. B. KIRKMAN]

This beautiful little bird (Pl. 44, p. 424) visits us each autumn on its way to North Africa from its summer haunts in Scandinavia.¹ It is on the southward migration that it is most often observed, and especially in the county of Norfolk, where, on account of its comparative rarity as a British species, it receives a warm welcome. "On September 24th . . . several more bluethroats were seen and shot. . . . On the 25th . . . several more bluethroats were obtained."² Each year the slaughter of this and other little migrants goes merrily on without check or serious rebuke, and is carried to an extent for which no reasonable excuse, on scientific grounds, can be made.

The contrast between its winter abode in the semi-tropical countries on the southern shores of the Mediterranean and its summer abode in the far north is striking. It is in the latter that it passes the season of courtship, and often in sight of melting snow. Its favourite nesting-places are among the moss and lichen-clad hummocks or the stunted bushes of Scandinavian marsh land and the Russian tundra.³ In these wild and somewhat desolate scenes its bright blue breast, with the red star burning in its centre, are as grateful to the eye as its song is to the ear. In Norway the bird is said to take the place of our robin, the latter being there very shy and retiring, and to be found usually in the forests.

In many respects it resembles the robin; in its form, its nervous quick actions, its nesting habits, and, as we shall see presently, in its love displays. Again, like the robin, though occasionally hawking for flies in the air, it seeks its food, worms and insects, chiefly on the

¹ See the "Classified Notes" under Distribution.

² *British Birds*, ii. p. 201.

³ The birds that visit us on migration appear to come from the central mountain ranges of Norway, those in Sweden and North Russia belonging to another sub-species (*C. svecica svecica*), but they are here considered together under the head of red-spotted bluethroat. See Hartert, *Vögel der Paläarktischen Fauna*, i. p. 745.

ground, where, curiously enough, unlike robin, redstart, or nightingale, it is said to run "like a wagtail," as well as hop.¹ This habit it shares with its congener the white-spotted bluethroat, a Central and South European form, which has strayed occasionally to our shores, and which has in the blue of its breast a white, instead of a red spot. Commenting on the running of the latter, Naumann observes that it sometimes hops so fast that its feet are scarcely visible; it then *appears* to run. This applies no doubt also to the red-spotted form. The same observation is made of the wheatear by Miss Turner in one of the sections which precede. Still Naumann definitely states that both bluethroats do run,² in which of course they are not alone among the *Turdidæ*. The song-thrush, for instance, both hops and runs. When thus running the white-spotted variety will jerk its tail like a robin, and will also fan it, as does occasionally the redstart, and no doubt also the red-spotted bluethroat.³

The bluethroat seems to have borrowed one or more of his habits from each of his nearest relatives, adding to them the stamp of his own personality. This is certainly true of his song. It is sung in separate phrases like that of the nightingale, which it resembles in some of its notes.⁴ One of the phrases consist of remarkable bell-like notes, which appear to be peculiar to itself. They have been compared to the sound made by striking a metal triangle,⁵ or a suspended bar of steel with another piece of the same metal.⁶ These notes, according to Seebohm, who writes as if his statements were based on personal observation, come at the end of the song, and are uttered only after the female arrives, for, as in the case of the vast majority, if not of all migrants, the cock reaches the breeding-place some days before his mate. But this is not all. The bluethroat—and here he resembles not the robin, or the nightingale, but rather the wheatear

¹ *Zoologist*, 1865, p. 9605.

² *Vögel Mitteleuropas*, i. pp. 39, 48. See also Jerdon, *Birds of India*, ii. p. 153; quoted by Dresser in his *Birds of Europe*, who notes the same fact of the red-spotted form.

³ Baily, *Ornithologie de la Savoie*, ii. p. 304.

⁴ O. V. Aplin, *Zoologist*, 1896, p. 426.

⁵ P. and F. Godman, *Ibis*, 1861, p. 82.

⁶ Seebohm, *British Birds*, i. p. 272.

—has a song-flight. He will carol as he flies upward, and then, with wings and tail outspread, with glints of many colours, like a jewelled elf, still singing, he will descend. Those who have seen this flight have compared it to that of the tree-pipit, the resemblance being further increased by the fact that the bluethroat will end the performance by alighting on the topmost twig of some bush. Where bushes are absent he contents himself no doubt with a mossy hummock.¹ According to Bailly, the white-spotted form has the same song-flight; it mounts upwards almost vertically from some bush, singing, and then drops back on to its perch, sometimes with a “pirouette.”² The redstart also sings as he flies, but he cannot be said to have a set song-flight. In this the bluethroats appear to surpass all the members of their sub-family.

The notes of both the bluethroats are said to resemble those of the redstart; they utter both a soft “*ptwi*” and the sharper “*tack*” or “*teck*.”³

Of their love displays we have fairly detailed information. Those of the red-spotted form have been described by Mr. O. V. Aplin, who witnessed it in the north of Norway, the snow being still upon the ground: “Presently the male of the pair sang in an ecstasy for his plain-coloured mate, which, I could see, was creeping and hopping about among the growth of Arctic birch close to where he settled, and he was performing like a robin. His head and neck were stretched up, and his bill pointed nearly upwards; his tail was flirted up and down, or held at less than a right angle with his body, and his wings were drooped. So he sang until she moved away, and he dashed after her.”⁴

The displays of the white-spotted form may be seen in its more accessible breeding haunts in Central and Southern Europe. It sings with drooping wings, at first softly, then with increasing force,

¹ *Ornithologie de la Savoie*, p. 272; *Zoologist*, 1896, p. 426 (O. V. Aplin); *Ibis*, 1861, p. 82 (P. and F. Godman).

² *Ornithologie de la Savoie*, ii. p. 305.

³ Zander, *Vögel Mecklenburgs*, pp. 243-8; Bailly, *Ornithologie de la Savoie*, ii. p. 307.

⁴ *Zoologist*, 1896, p. 426.

erects its tail, and *spreads it fanwise*, erects the neck and head, stretching them back till they almost form, with the tail, an arch over the back, and, fixed rigid in this remarkable position, it curtsies, moving the legs only, thus looking like an automatic bird set to work by the insertion of a penny-in-the-slot.¹ If, says Bailly, it happens to hear, when feeding, the call-note of its mate, it will at once pause to mark the direction of the sound, and then set off with its tail fanned and stiffly erect, with a soft responsive "*ptui*."² As both the forms seem identical in their habits, it is more than probable that the fanning of the tail and the automatic curtsy enter at times into the displays of the bluethroat. Enough has been said to show that a more detailed comparative study of the displays of the bluethroats and their near allies is likely to prove of considerable interest.

In their nesting-site, nest, and eggs, both forms resemble closely the robin. Seebohm states that those of the red-spotted form may be described as "miniature eggs of the redwing," their coloration being greenish-blue spotted with reddish-brown. According to Bailly, the male of the white-spotted form shares in the construction of the nest, and, according to Naumann, in incubation also, the latter lasting about a fortnight.³ The young, when left to their own devices, live each by itself, and may be seen running about "as quick as little rats, holding, like their elders, their tails erect."⁴ These statements probably apply equally to the red-spotted form, though it remains to be shown that the participation of the male in nest-making and incubation is to be considered habitual.

The prejudice of the young against the society of their brothers and sisters, and the pugnacity of the species suggest that the bluethroats are, like the robin, in the habit of passing the autumn and winter each solitary in its own feeding area. But on this no satisfactory evidence is yet available.

¹ E. Ziemer, *Ornith. Monatsschrift*, xii. p. 298, quoted in Naumann, *Vögel Mitteleuropas*, i. pp. 40-1.

² Bailly, *op. cit.*, pp. 305-6.

³ Seebohm, i. p. 273; Bailly, ii. p. 306; Naumann, i. p. 41, *op. cit.*

⁴ Bailly, *op. cit.*, p. 307.

THE REDBREAST

[F. B. KIRKMAN]

Of all the birds that inhabit our isles the robin holds first place in public affection, and the reason is not far to seek. His dapper figure and glowing breast, the bright black eyes, alert with intelligence, the thin straight legs, inclining outward, and looking like long props, the engaging bobs, and flicks and jerks, the quaint air of contemplative gravity suddenly assumed and as suddenly flung off to give place to some lightning sleight of wing, his winning but still cautious trust in man's goodwill, his ingenuous faith in his own acuteness, his prompt pugnacity, the song with its note of quiet melancholy, the song that more than any other has in it the poetry of autumn and the fall of the leaf, and lastly, the small round sad figure suppliant at the window when chilling blasts and driven snow without make brighter still the crackling logs and Yule-tide cheer within—all this, and much more, have set the robin in a place apart, unique, and have made him a welcome guest in every garden.

It is outside the breeding season that the robin is most in evidence. When in it, he is very much absorbed by his family affairs, and does not then encourage any advances or interference, however well meaning, by human beings. It is not till about August that he shows himself once more prepared to bestow the privilege of his company upon such as merit it by discretion in their behaviour and liberality in their offerings. It is then also that he begins in good earnest to make his arrangements for the winter. It is no easy task he sets himself. The robin, unlike any other British winter species that I know of, is found from about the end of August to the middle of February in solitary possession of a more or less well-defined feeding area from which all others of his

Plate 45

Redbreast

By A. W. Seaby



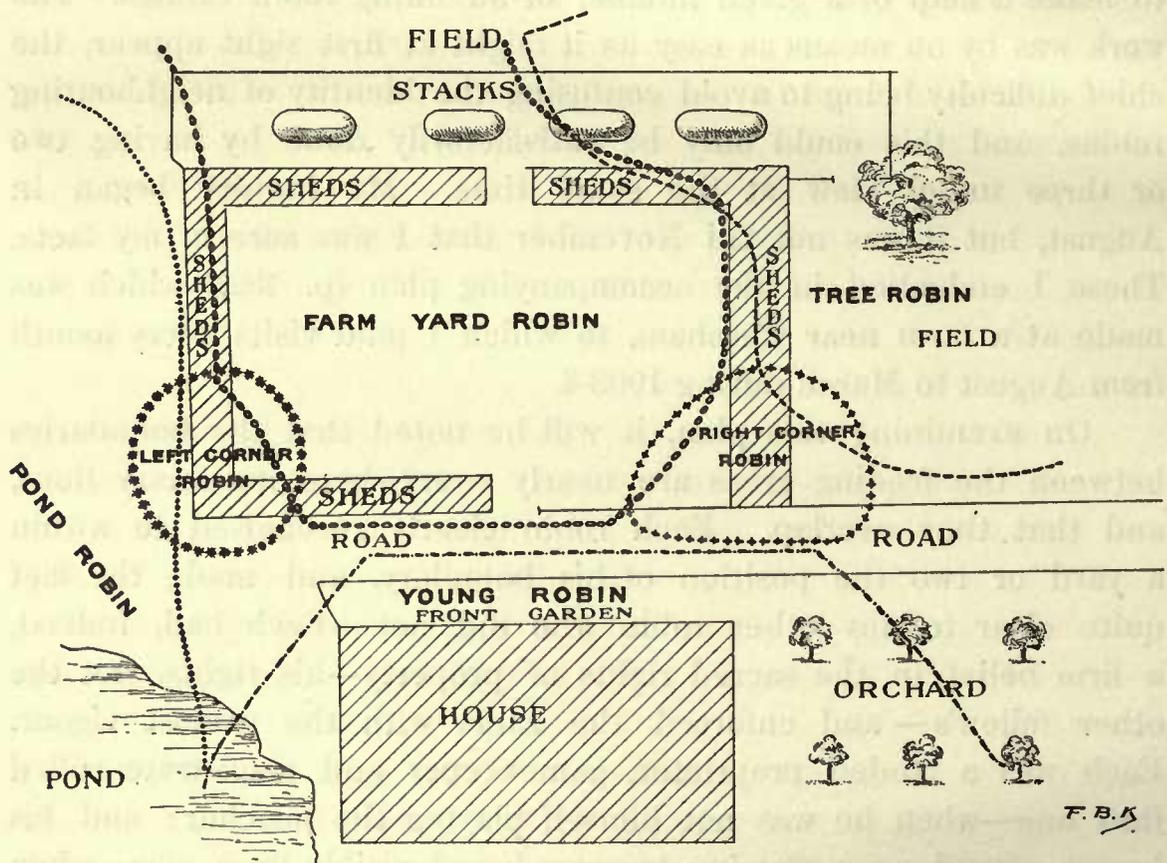
own species are excluded. Pressure of cold weather may sometimes force him to associate with his fellows in order to share the crumbs put out by the charitable, but he can hardly be said to suffer them gladly. He is happy only when alone. Hence the old saying, that one bush will not harbour two robins—*Unum arbustum non alit duos erithacos*.

It occurred to me one autumn that it ought to be possible to make a map of a given number of adjoining robin estates. The work was by no means as easy as it might at first sight appear, the chief difficulty being to avoid confusing the identity of neighbouring robins, and this could only be satisfactorily done by having two or three under view at the same time. My inquiry began in August, but it was not till November that I was sure of my facts. These I embodied in the accompanying plan (p. 432), which was made at a farm near Chesham, to which I paid visits every month from August to March during 1903-4.

On examining this plan, it will be noted that the boundaries between the feeding areas are nearly everywhere imaginary lines, and that they overlap. Each robin clearly recognised to within a yard or two the position of his boundary, and made the fact quite clear to any other robin who did not. Each had, indeed, a firm belief in the sacred rights of property—his rights, not the other fellow's—and enforced the same with the utmost vigour. Each was a landed proprietor, gamekeeper and magistrate rolled into one—when he was not himself playing the poacher; and his breast served as a flaming trespass-board visible from afar—when it did not betray its owner in some flagrant act of trespass.

So habituated were these robins to living each within his own estate that it was not easy to drive them out. When disturbed from one perch, they moved to another, and so on back again to the first. One day (November 22) I “moved on” the Field Robin from point to point twelve times round his property, and only twice did he quit it, though evidently considerably alarmed by my unusual behaviour.

On both these occasions he merely disappeared over or through the sheds to reappear shortly afterwards. I repeated the experiment with the same results at a later date (January 3) and on the following day tried its effect upon the Right Corner Robin who, three times in succession, went from his corner of the yard to the roadway, thence into the doubtful borderland between his own plot and that of the Field Robin, by whom he was promptly chased back into the yard.



So wedded, again, is the robin to the idea of a circumscribed area that he will confine himself to it, even when, as for instance in Regent's Park, London, there are wide adjoining spaces quite unoccupied by his kind. His craving for property is limited, and therein he compares favourably with certain of the human kind.

Perhaps the most striking fact shown by the plan is the inequality in the size of the estates. The two Corner Robins had very literally to

lead a hole-and-corner existence. This was particularly the case with the Left Corner bird, whose right to put foot in the yard at all was disputed by the Yard Robin. The former passed, indeed, a large part of his time making up his mind to descend upon the rich plain of succulent ooze that lay spread before his eyes. About the end of the year he disappeared from the scene. He was killed perhaps by his more powerful neighbour, or seized unawares in some corner of his shed by one of the lean and hungry cats that prowled about the farm.

As the division of estates made at the beginning of the season cannot possibly satisfy all parties, there is nothing to surprise us in the fact that boundary disputes continue throughout the winter. A robin's life is, indeed, at this season, busier than that of most birds. He has not only to find his food like them, and guard against surprise from birds and beasts of prey, but also to keep an ever watchful eye on the borders of his property. These disputes end often enough in fights which are sometimes fatal. When not fatal, the combatants are so fast and furious in their movements as they flutter in mid-air, that they will sometimes drop to the ground exhausted and there lie for a time, side by side, motionless, two little limp patches of ruffled feathers. Some sing as they fight. One very wet day three were seen engaged in mortal combat, all muddy, all exhausted—yet still fighting and singing.¹

They frequently attack other species that happen to feed within the limits of their estate, but, as far as my observation at the Chesham farm went, these learn in time to regard the robin's assault with a kind of tolerant indulgence, just moving a foot or two away and continuing to feed. The species I saw behaving thus were hedge-sparrow and pied-wagtail. On one occasion, however, a hedge-sparrow chose to take offence and, turning upon the assailant, drove him off. Robins are not equally pugnacious, some hesitating to rush in where others show no fear. I have seen one continue

¹ C. R. Witchell, *Nature's Story of the Year*, p. 120.

to protest in a state of polite indignation against the presence of some house-sparrows at his dinner-table. While he protested, they finished the crumbs.

The estate that surrounded the front and sides of the house was in possession of a young robin of the year. During the preliminary settlement of boundaries early in August he was in the habit of entering his side of the farmyard. From this he was driven off by the Yard Robin, who was at the time in full moult, tailless, disreputable in his appearance and short in his temper. But the young one had no difficulty in maintaining his position in the garden, where he had established a right to the crumbs from my table. In nearly every contest between robins the bird in possession seemed, indeed, to have a moral advantage over the invader. His righteous indignation lent him force, and in many cases the foe did not even await the onset.

My own observations at this farm and elsewhere have led me to doubt the statement that the young of the year are generally driven away by the adult birds. It is sometimes supported by another statement to the effect that the young disappear. This in a sense is true. As young birds they do certainly disappear, for, in and about August, they moult off the brown and buff feathers of the fledgling stage, and assume the red breast and uniform olive-green back of the adults, from whom they then become practically indistinguishable. It is then very difficult to follow their movements. I think observation will show that victory does not depend so much upon age and strength but individual pugnacity and courage, in which robins, like human beings, differ much.

The robin's peculiar system of private property is the result, no doubt, of his instinctive sense that so much ground, with the grubs and other small game therein, is necessary to his sustenance during the winter. But what long chain of circumstances in the remote past was it that led him to adopt this system rather than those, less injurious in their operation, which are adopted by the

other species that pass the winter in the same habitat; for instance, by hedge-sparrows, which are usually to be seen two, three, or even more in peace together, or by thrushes and blackbirds which, though not gregarious, are yet not exclusive? The question, like most others arising out of the habits of birds, waits for an answer.

I have not so far been able to watch closely the break up of the winter territorial system under the compelling influence of spring, and cannot, therefore, say how the transition from the state of active hostility to the very different one of love is made or how long it takes. It is probably effected towards the end of January or the beginning of February, for Mr. Boraston has noted robins courting on the last day of the former month.¹ I have two notes made in different years, both dated February 21. One records that a robin was seen following another with anything but hostile intent, and with a tendency to assume the gymnastic courting attitudes, of which we shall have presently more to say. The second records the presence of a pair in a tree, two feet apart, the one singing to the other. It may here be observed that both sexes sing in winter, at least one judges so from the fact one meets none that do not so, but whereas the spring puts more fire into the notes of the cock, it has not the same effect upon the hen. To what extent, if at all, she continues to sing during the spring I do not know.

As the robin does not usually begin to build its nest till towards the middle of March, the period of courtship may be said to last over a month. The birds' love displays are remarkable. The earliest date on which I have myself seen them is March 8th. On this occasion there were three robins present, two being stationary, and perched some feet apart in a tall hedge. The third, presumably the male, kept passing from one to the other, his tail very erect, and the neck and head stretched stiffly forward, and sometimes upward, or even backward, as if he were trying to make the top of the head and the tip of the tail meet over his back. If you can imagine a gymnast-contor-

¹ *Birds by Land and Sea*, p. 65.

tionist sitting with his legs round his neck, gazing in rapt adoration upon the eyes of his beloved, or seeking to storm her heart by performing with passionate agility the other feats proper to his art, you will gain an approximately correct idea of what a robin looks like when making love. My recollection of the stationary birds is that they sang, and showed a disposition to be unpleasant to each other, but unfortunately I omitted to note down at the time this particular detail of the scene, thus failing to practise in its entirety, as every ornithologist should, the precept of the immortal Cuttle—"When found, make a note of!"

Some years later, and nearly on the same date (March 12th), I saw a somewhat different display. There were two robins in a tree one perched above the other. The upper bird, with its tail but slightly erect, kept swaying the head and neck in a strange, almost convulsive, and by no means attractive manner from side to side. The other, presumably the Romeo of the scene, had his head and tail in the tense erect attitude already described; he gazed upward towards his Juliet and warbled softly. The proceedings were terminated by an adjournment for refreshments.

It will be observed that here one bird adopted what may be called the gymnastic and the other the swaying posture, but it is not easy to be certain which was the cock and which the hen, as similarity of plumage makes the sexes difficult to distinguish. On other occasions both postures have been seen to be adopted by one and the same bird. This occurred in an instance described by Mr. Ogilvie Grant, who observed that the cock, as he became more excited, "gradually raised his body to its full height in a perfectly erect position, with his bill pointing straight into the air, and his tail raised to an extraordinary extent. Then with throat puffed out, he uttered a continuous gurgling twitter, swaying his body meanwhile from side to side." The hen "half-crouching, with drooping wings and slightly raised tail, puffed out the feathers of her sides and flanks." This performance was gone through twice, and lasted about a minute.

The performers, it is interesting to note, were already paired, and thus provide yet another instance of the fact that love displays are not confined to the period of courtship.¹

Mr. O. V. Aplin records that he saw the extreme erect posture just described assumed by two rival males in presence of a hen. They were a couple of inches apart and sang "in a shrill constrained tone." That they should have felt constrained is not surprising, for each had good reason to anticipate a sudden cuff on the head from his fellow swain. One finally gave up, and was chased away into the shrubbery.²

An unusual attitude struck by a bird may, like its song or any given note it utters, be used to express at different times different emotions. This, I have assured myself, is true of the love postures of the robin. In autumn and winter they serve to express, not love, but enmity and pugnacity. At these seasons I have frequently observed individuals that were approaching each other with hostile intent cock up their tails and erect the neck and head, though not in the extreme form described by Mr. Ogilvie Grant. The attitudes adopted varied much from bird to bird, a fact well illustrated by two who lived in adjoining estates in my garden, and whom I had ample opportunities of watching. One usually kept its body upright, and rarely erected the tail, which was left in its customary position. It was about the head that the excitement felt made itself chiefly apparent. This was thrown back, the beak pointing upward and forward. The throat was puffed out so that each feather stood apart, and the crown raised into a little conical heap. In the moments of crisis, corresponding to that when a human being, having taken off his coat, is on the point of closing with the enemy, this bird would almost invariably and, it seemed to me, quite involuntarily, burst into snatches of song. On one occasion I saw it fan the tail. The other bird usually held the body in a horizontal position and the tail straight up. The whole front part of the body was stretched stiffly forward,

¹ *Ibis*, 1902, p. 677, which contains an illustration of the gymnastic posture by Mr. G. E. Lodge.

² *Ibis*, 1903, p. 133.

inclining upward and often sideways. The feathers of the head and throat were compressed, giving to the bird a thin elongated look sharply in contrast with that of its opponent. The bird sang rarely, but once I saw it swaying its body from side to side. This, however, was in mild weather (Oct. 15, 1910), and may have actually been a courting action, for robins are known to breed exceptionally at this time and later. But I do not think it was, the general character of the relations of the two I was watching being unfriendly. These displays seldom ended in actual blows, one or other of the parties frequently having his attention diverted by the sight of something eatable in the grass, the discovery being regarded by both as quite a legitimate occasion for a truce. A young robin, not out of its moult, which had a broken wing, used, in spite of this disadvantage, to defy both the adult birds whose postures I have just been describing. Its method was to crouch in the grass, and with its tail very erect to present its beak like a bayonet to the foe, often at the same time uttering by way of war-song a sort of low continuous warble. On one occasion my wife saw one of the older robins also crouching, and in this odd attitude both remained for a short time facing each other. It should be added that hostilities were often actually begun without any of the above-described preliminaries. Beneath all this lack of uniformity there may have been some unifying principle, but a much closer study of the facts will be needed to make it apparent.

In the breeding season cocks do not limit their attentions to displays, but express their feelings in a more practical form by bringing choice morsels to the loved one, which she receives with grateful quivering wings. It would be interesting to know whether they do this before as well as after pairing, whether, that is, the making of gifts forms a part of the courtship. The cock's zeal, however, does not, as far as my observation goes, lead him to assist his mate in the building of the nest. For this remissness he has, occasionally at least, a legitimate excuse, for I have seen the wife, when carrying building material, turn and drive the husband from her

presence. She was engaged at the time, not on the actual construction of the nest, but in paving with dead hawthorn leaves the passage that led to it beneath a tuft of grass. Tunnel-shaped entrances to robins' nests, when on the ground, are common, but what the bird gained by the leaf pavement I do not know.

That the robin is prompt to desert its nest, at least before incubation begins, is a familiar fact. There are, however, exceptions. I once pulled up a robin's nest because it was built in too exposed a position, and left the material lying about in the hope that the bird would use it to reconstruct the nest elsewhere. He in fact did work most of it into the fabric of the new nest, which, next morning, I found neatly built on the original site! Not having the heart to pull it up again, I made on one side a small erection of sods to hide it from view. The robin thereupon deserted. Rooting up its nest was an act of frank villainy it could understand and remedy. But this mysterious erection of sods! No. That was neither to be understood, nor remedied, nor endured.

The cock is said not only to feed the hen when incubating, but occasionally to take his turn upon the eggs.¹ Possibly in this individuals differ. Both, however, are zealous in feeding the young, the hen, as a rule, making more frequent visits than her mate, especially when the nest is under observation, her anxiety to nourish her babes overcoming her sense of caution much more rapidly than in the case of the cock—a characteristic that is, of course, not peculiar to the species.

The young of the first brood, when fledged, continue to be fed by the parents till the nest for the second brood is begun, and may possibly be fed by the father for some time later. The individual young birds of both broods, and of the third when there is one, lead each a separate existence, which, as the summer progresses, gradually develops into the state of active hostility already described, when they battle not only among themselves, but, oblivious of filial piety,

¹ J. B. Bailly, *Ornithologie de la Savoie*.

with their parents as well. They are very easy to tame, and a judicious appeal to their appetite will make them quite friendly. A young robin in my garden soon made himself one of the family, feeding from our hands, perching on the tea-table, on our knees, and on my head. He helped himself to all eatables, and showed a special weakness for cake. Other young robins occasionally slipped in when his back was turned, but, if caught, they were pounced upon and driven away with fury.

The young robin in question was good enough one day to make me aware of a fact in his digestive economy which to me at least was new. I found it, however, noted by Naumann.¹ This was that, like other *Turdidae*, the robin regurgitates hard indigestible matter in the form of pellets. The one my robin put in my way was composed for the most part of small grit and the wing cases of beetles. The grit was probably swallowed with worms, and served, no doubt, to assist the process of trituration in the gizzard. It is interesting to note that the robin, though its beak is comparatively weak, being much less thick and strong than those of the seed-eating Finches, nevertheless eats seeds freely and without ill effects in captivity, and does so occasionally in the wild state, as post-mortem examinations prove.² It is also expert in catching flies, and may be seen not only snapping them up in the air, but also picking them off the surface of water. This it does by pausing in its flight, hovering over its prey, then seizing it with its beak.³ It has even been known to catch stickleback.⁴ It is scarcely necessary to add that the bird is one of the gardener's best friends.

The young robin referred to above sang occasionally, both before and during its moult. The first date on which I heard this song was July 30th, a fact which lends little support to the view that birds learn to sing by imitation, for at this date the song of an old bird

¹ *Vögel Mitteleuropas*, i. p. 28.

² Robert Newstead, *The Food of Some British Birds*, p. 21, published by the Board of Agriculture.

³ *Zoologist*, 1902, p. 405 (Coward and Oldham).

⁴ Ussher and Warren, *Birds of Ireland*, p. 13.

was rarely, if ever, to be heard. Further, it was not the full-toned song of the adult, but a low warbled soliloquy, very sweet nevertheless, and often uttered as the little performer sat confidently perched close by, his beak slightly open, his bright black eyes and soft little ball of a body making a charming picture of peaceful repose and content. Next moment, however, the same winsome creature might become a feathered fury grappling with his neighbour, or posing defiantly in front of him, uttering the self-same warbled notes. Such is the demoralising effect of an unsound economic system!

The full song of the adult robin is one of the most beautiful uttered by birds. Not only has it a "peculiar tender pathos," but it is possibly more varied than any other. "Listen to him," writes Mr. Warde Fowler, "intently for a quarter of an hour, and you shall hardly hear the same phrase twice over."¹ It is in autumn and winter that this song is most welcome; it seems then as much the voice of the fallen leaf and the leafless bough as the song of the dipper is the voice of the mountain beck, or the far wild call of the grouse is that of the moorland.

Apart from the song, the robin has certain well-marked notes. One is the "*ptsee*," high pitched, long drawn, plaintive, and sometimes so penetrating that it causes an actually painful sensation in one's ear. It is used to express the more intense feelings of anger or fear. It is frequently heard in the breeding-season when the birds are alarmed by a too near approach to the nest or young, and also frequently in winter as a cry of alarm or menace. The note has appeared to me to be simply a later modification of the call-note of the young for food—the strident "*ptweep!*" or "*ptseep!*" The latter in a form slightly modified, if at all, corresponds possibly to the call-note uttered on migration, and described by Naumann as a shrill "*tshrietsch.*"² When the birds are in the excited condition that precedes migration, they are heard uttering the familiar "*tik!*" which, rapidly repeated, has

¹ *Summer Studies of Birds and Books*, 1895, p. 162.

² *Vögel Mitteleuropas*, i. p. 26.

much the sound made by the reel of a fishing-rod when turned slowly. This "reeling" is heard frequently from all directions when the birds are preparing to go to roost, and it serves to give expression to various of the less intense states of mind, such as mild defiance, alarm at the sight of a cat or other enemy, and possibly feelings of cheerfulness not strong enough for song. Related to this note, but clearly distinguishable from it, is a "tsip," which sometimes precedes the long-drawn "ptsee!" I have heard it also frequently uttered by the young, when in a militant mood, before they learned the "tik!" By the adults it is often used on the same occasion in a double, sometimes a treble, form—a sudden "tsip-pip!" or "tsis-ip!" Lastly, at the moment when one robin is on the point of dashing upon another I have occasionally heard a note which can only be described as like the spit of a cat.

The migrations of the robin, both inside our Isles as well as from and to the Continent, are fully dealt with in the "Classified Notes." It is enough to add here that the Continental birds, those that have passed the summer in Northern Europe, may sometimes be seen about October arriving in thousands on parts of our east coast. For instance, in the Spurn district of Yorkshire they may be found at that time swarming in the hedges and gardens. Many on their arrival drop into the long sea-grass on the sandhills; others seek a meal on the shore itself, along the high-water mark. Exhausted by their long flight, they are so unwilling to move that caution is necessary to avoid treading upon them. They easily fall victims to birds of prey, notably the great grey-shrike, which arrives about the same time, and recruits its strength at the expense of the smaller migrants.¹

Even in the midst of his migratory movements the robin does not lose sight of that little estate which is to be his and his alone. A striking example of this is given in Rennie's *Field Naturalist* for

¹ For these facts I am chiefly indebted to an account by the late Mr. J. Cordeaux in the *Naturalist*, 1893, p. 9, quoted in Nelson's *Birds of Yorkshire*, pp. 42-7.

Nov. 1833¹ (p. 467). On the 16th of September a number of robins alighted on a ship off the coast of Yorkshire. After a while, all continued their journey except two. These at once divided the ship into two estates, one occupying the bow end, the other the stern end of the vessel. Any attempt by one or the other to cross the boundary line was regarded as a declaration of war, and hostilities at once ensued. How the affair ended is not recorded.

THE NIGHTINGALE

[F. B. KIRKMAN]

As for most of us there is but one lark, so there is but one nightingale, the "wakeful bird," the "solemn bird" of Milton, "that darkling tunes his note in shadiest covert hid," Wordsworth's "creature of a fiery heart," Keats's "immortal Bird." For most of us, indeed, there is likely to remain but one nightingale, unless fortune permits us to go as far east as Denmark or Sweden in order to seek and hear that other nightingale, his rival, for rival he has, and one of no mean order. This species (*Luscinia luscinia*)—the thrush-nightingale is its English name, given it because of the somewhat faintly spotted appearance of its breast—resembles our own, but is larger, darker on the back, wings, and forebreast, less rufous and browner on the tail, and has a white throat and stouter bill. Generally speaking, its range is more northerly—hence the name of northern-nightingale sometimes applied to it—and more easterly than that of our form; it inhabits East Europe—omitting the north of Scandinavia and Russia—South-west Siberia and Turkestan, and is a migrant to East Africa, leaving its congener in possession of West and Central Europe, and nearly all the shores and islands of the Mediterranean, from the Pillars of Hercules to the Isles of Greece and beyond, except the eastern part of the African coast-line.²

¹ See Nelson, *op. cit.*

² E. Hartert, *Vögel der Paläarktischen Fauna*, i. p. 737.

The ranges of the two species overlap in parts of Germany and Russia, though here they appear to occur in quite different localities.¹

That they differ in the call- and alarm-notes is certain, but wherein exactly the difference lies appears to be still a matter of doubt. Most writers, following Naumann, ascribe to the Northern form two notes syllabled as "*glock*" and "*arrrr*" corresponding to the well-known soft "*weed*," "*weet*," or "*weep!*" and the croaking "*krrrrr*" of our species. Later observers, to whom it has occurred to consult the bird itself, report that its usual note is "*weeht*," or "*weehst*," therefore very like the "*weet*" of our nightingale, but sharper and higher pitched.² The same distinction appears to apply to the croaks of the two species, if one may apply a term of such unmusical denotation to any sound uttered by musicians so great. Yet "croak" it is, and the faithful biographer cannot but record the fact. And the fact has comfort in it, for it brings these immortal birds down to our human level. It shows them not exempt from the failings that sometimes, no doubt, beset even a *prima donna*, whose voice, soul-stirring and entrancing on the stage, may yet, behind the scenes or in the privacy of domestic life, assume tones that might well shock a self-respecting nightingale as much as his croak shocks us, especially when he interrupts (as I have heard him do when alarmed) some fine passage, in his song to give it utterance.

The songs of the two species differ enough to make it impossible to mistake one for the other. Which is the better is a question that each will answer according to his individual taste or the standard of judgment he adopts. The song of the Northern form or "*Sprosser*," as the Germans call it, lacks the soft, lulling, long-drawn notes of our Western form, but according to Dr. Hartert it surpasses ours in its depth and force, and in the beauty of its oft-recurring bell-like

¹ F. C. R. Jourdain (*in litt.*). There are two other forms, both breeding in Asia, which are classed by Dr. Hartert as sub-species of our nightingale under the name of *Luscinia megarhynchos golzii*, and *L. m. africana*. (*Op. cit.*, p. 735.)

² E. Hartert, *op. cit.*, p. 737; Naumann, *Vögel Mitteleuropas*, i.; Dresser and Sharpe, *Birds of Europe*.

tones ("Glockentöne"). Whether the thrush-nightingale has, like ours, "that marvellous *crescendo* on a single note, which no other birds attempt,"¹ is not recorded.

In their habits the two forms do not appear to differ, but it is stated that the thrush-nightingale shows even a stronger liking than our own species for the vicinity of water or marshy meadows. Their eggs, again, are of the same coloration, those of the Northern form being, as one might expect, a little larger.

Enough has been said to show that, so far as the evidence goes, our nightingale can make a good claim to be, if not unequalled, yet still unsurpassed as a songster. Thus reassured, we can, with the tranquillity of an unshaken faith, proceed to consider more closely its art and life.

The charm of the nightingale's music is said to be enhanced by the fact that it is heard in the silence of the night. This is so; for the same song heard by day, as it often is, seems not quite the same, almost an echo of itself. Nor is this hard to realise. To stand at night near some dark thicket, made darker by the moonlit sky behind it, and deeper by a lurking sense of mystery within it, there to wait, and then, without warning, from the innermost thicket itself, to hear uprising through the startled silence a sudden stream of impassioned music, sweet yet strong, and almost fierce in its directness; so to hear it, and as suddenly to hear it cease, leaving the silence waiting; to realise that these all-prevailing notes issue from the vibrating throat of one small bird—that has surely in it something to kindle a little spark in the dullest imagination, and stir chords in hearts the least responsive. It has, in truth, struck chords in some of the most responsive hearts of every age; it has inspired far greater music than itself, and, in so doing, has itself grown greater, for the song we hear is transfigured and magnified beyond reality in the mind of the listener by numberless inspirations drawn from the souls of the great immortals.

¹ Warde Fowler, *A Year with the Birds*, p. 106.

The nightingale's song owes much, then, to place and time, and much to the associations with which it is blent, but it owes also and primarily much to its own inherent beauty. On this point we may trust to the judgment of one who is not only a student of bird-lore, but a master of music: "It is a pity to compare the songs of birds; our best singers, thrush, blackbird, blackcap, robin, and garden-warbler, all have a vocal beauty of their own; but it may safely be said that none approaches the nightingale in fire and fervour of song, or in the combination of extraordinary power with variety of phrase. He seems to do what he likes with his voice, yet never to play with it; so earnest is he in every utterance—and these come at intervals, sometimes even a long silence making the performance still more mysterious—that if I were asked how to distinguish his song from the rest, I should be inclined to tell my questioner to wait by a wood till he is fairly startled by a bird that puts his whole ardent soul into his song."¹

It is this same fervour that Wordsworth, more than any other poet, has caught and expressed:—

"O Nightingale! thou surely art
A creature of a fiery heart!—
These notes of thine—they pierce and pierce;
Tumultuous harmony and fierce!"

The variety in the nightingale's song may be judged from the fact that a good songster has been computed to have over twenty different phrases, and in these taken together not less than fifty separate notes. The number of notes uttered by the species would reach a much higher total, as the songs of individuals vary, most of them no doubt introducing into their phrases notes borrowed from other species.

One sometimes asks what impression is made on other birds by the song of the nightingale. It is to be feared little. One day when I stood listening to his ringing anthem, a little brown body

¹ W. Warde Fowler, *A Year with the Birds*, 2nd edit., p. 106.

Plate 46

Nightingale

By A. W. Seaby



of a bird suddenly darted into view, flung itself without ceremony upon the most conspicuous perch to be seen, and there burst into a strident song that filled the wood. Need I say this vocalist was a wren? The nightingale stopped singing. He at least seems to have been impressed—painfully so. And if he was, small wonder!

Many who have heard the nightingale sing have not seen it doing so, and their impression of the bird when thus engaged is gained from stuffed specimens or faulty drawings. In actual life it has not the long-drawn thin appearance, as of a wild emaciated minor poet, which it is given, for instance, in the glass case at South Kensington. It is a well-built bird, robust, compact. Notwithstanding the almost violent vibrations of the throat which set every feather on it quivering, and send responsive, though far less perceptible, tremours through the whole body to the ends of the slightly drooping wings and down-bent tail, it preserves, even when uttering its most tumultuous notes, an appearance of ease and perfect self-possession.

The same lack of familiarity with the bird itself accounts partly for the contrast not uncommonly made between the beauty of its song and the plainness of its plumage. No one, however, can see the nightingale without being impressed by the fact that it is a handsome bird, shapely in all its lines and curves, and though lacking any striking colours, yet showing soft tints of russets and chestnut reds and greys that have a beauty quite as pleasing in its way as that of plumages much more resplendent. And just as Meredith's Egoist, Sir Willoughby Patten, and our Sir Robin Redbreast have a "leg," so the nightingale has a "tail," not lively like that of the redstart, and not so brilliant in its warm chestnut hue, but larger, broader, more shapely, more imposing, and above all more weighty, so much so, that when the bird jerks it he seems to be lifting weight.

In many of its habitual actions the nightingale, like the redstart, resembles the robin. It has the same way of cocking its head on one

side to inspect the ground beneath its perch, then flitting down to make a closer inspection. It hops in much the same way, with the same flicks and jerks, but all is done more deliberately, with greater dignity and gravity. A robin may look saucy, a nightingale never; at least, I have never seen it look so, and hope I never may. A saucy nightingale is, indeed, unthinkable, an offence to gods and men. *Sint ut sunt, aut non sint!*

Like the redstart, the nightingale arrives on our shores each April to depart again in the autumn. The males precede the hens by several days, and, again like the two redstarts and many other species, they occupy a nesting-area from which intruding males are driven. Then each cock tunes his lay, and waits the glad hour that is to bring his mate. Some have thought he sings in order to signal to her the chosen spot, but if, as appears to be undoubtedly the case, birds return to their old haunts, then the hen has no more need of guidance to it than the cock. If he can find it unaided, so can she. It is far more likely that he sings because he must, because love has him in its grip, and because song, in the absence of the beloved, is the supreme expression of the passion which he unquestionably feels, at least in the physical sense.

There is no published description of the nightingale's love displays, but Mr. H. Eliot Howard tells me he has frequently seen the cock, when moving about the hen, fan out the shapely tail, and move it up and down. He will also sometimes fly towards his mate on outspread wings. As might be expected, he seeks to overcome his rivals by force of harmony as well as by strength of beak and claw.¹ It would be interesting to know, as in the case of the redstart, whether these rivals include the bird's own progeny of previous years, for it may fairly be assumed that these very likely return to the place of their birth.²

The cock has been seen to share in the work of constructing the

¹ For some further account of the nightingale's conflicts with rivals see Mr. E. Selous's *Bird Watching*, p. 307.

² Another opening for the use of leg-rings.

nest.¹ Whether he does so habitually is not known. It may be that, as in the case of other species, allowance must be made for considerable variation in the conduct of individual males not only in respect to nest building, but incubation also. As to the latter there is conflict of evidence, Naumann asserting that the male shares in the task, Bailly asserting the contrary. As there is no difference in the appearance of the cock and the hen, it is not possible to verify these statements unless one actually sees one of a pair taking the place of its mate upon the nest.

There can be no doubt that the cock habitually shares in the feeding of the young, and so much so that from the moment of the birth of the latter in June his song either ceases or is much less frequently heard. When the young are able to feed themselves, or rather when their parents think they can, for young birds are apparently prepared to go on being fed indefinitely, the family breaks up, and disperses. Exactly when the old birds quit their nesting-area is uncertain. The young themselves are not at first sight easy to distinguish from young robins, except by their rufous tails, which, on the other hand, makes it still easier to confuse them with young redstarts. Like young robins, they begin to sing before the autumn moult. This is completed sooner than that of their parents, thus enabling them to quit our shores at an earlier date.

The migration south takes place in August and September, and at that time large numbers of nightingales have been seen collected, awaiting the moment to depart, in a place so little with "high romances blent" as the bathing-machines on the beach at Brighton. A far cry from these to those

". . . magic casements opening on the foam
Of perilous seas, in faery lands forlorn."

¹ W. Farren (*in litt.*).

... Whether he does so habitually is not known. It may be that
as in the case of other species, whenever there is a change
in the position of the young, the mother will not only in general
be most faithful, but incubation also. It is to be noted that there is a certain
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Like some robins they begin to sing before the autumn season.
This is considered sooner than that of their parents, thus leading
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A lot of them there to those.

THE BRITISH BIRD BOOK

THE
BRITISH·BIRD
BOOK

AN ACCOUNT OF ALL THE BIRDS, NESTS
AND EGGS FOUND IN THE BRITISH ISLES

EDITED·BY

F·B·KIRKMAN·B·A·OXON

ILLUSTRATED BY TWO HUNDRED COLOURED
DRAWINGS AND NUMEROUS PHOTOGRAPHS

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