

EARLY MORNING SONG DURING MIDDLE
AND LATE SUMMER

BY CHARLES VAURIE

FROM the middle of June to the first week of September, 1944, Mrs. Vaurie and I were in the foothills of the Blue Mountains in the northern corner of Berks County, Pennsylvania. Our cabin was on the lower slopes of a 1000-foot hill called Round Top Mountain and overlooked a small river called Maiden Creek. The locality is known as Greenwald and is two miles south of the village of Kempton and twenty miles north of Reading. During the first part of our stay, there was much bird song and activity, but as the summer wore on, the amount of song decreased sharply until there was little in the latter part of July and even less in August. We thought that it would be of interest to keep a record of what birds sang and of how much they sang during the time of year when bird song is at its lowest. Accordingly a daily record was kept from July 20, 1944, to September 4, or for 47 consecutive days.

I am very grateful to Mr. Aretas A. Saunders for his interest in the reading of the manuscript and for his kindness in supplying comments on some of the species. He has graciously allowed me to publish these comments, based on recent observations in Fairfield County, Connecticut. They will be found following the summary of this article.

METHOD OF OBSERVATION

We got up at 5:30 A. M. or earlier, recorded all the birds singing around the cabin, and soon after breakfast went for a set walk of a little over one mile, usually returning at 8:00 A. M. when the period of observation would end. The birds, the amount of song, the temperature and the state of the weather were noted and were transcribed later onto a chart. This unfortunately resulted in a large unwieldy table which does not lend itself readily to publication.

The amount of song was recorded under four terms which are used throughout this paper and are to be understood as expressing quantitatively only the meanings I give them, as follows:

Very abundant—continuous full song with only normal intervals.

Abundant—singing very often and very noticeably but not continuously.

Moderate—singing noticeably but with fairly long pauses.

Occasional—singing in short snatches at long intervals of ten to fifteen minutes.

Only the birds that were seen regularly in the limits of the area covered and which are therefore assumed to be residents were included in this study. Most of the individuals had established territories and were to be found almost always on the same singing perches. In the case of some species—Blue Jay, Crow, Titmouse, and at the beginning the Goldfinch—the birds had no set locations but wandered through the area. Under each species is given the maximum number of individuals seen or heard on any one morning. Although it was not our purpose to hunt nests, we found the location of quite a number, and it was fairly easy to get a count of individuals. These numbers are given in parentheses after the names of the species. In some cases the numbers given are only estimates and are therefore indicated by a \pm sign. Since the same area was covered for 47 consecutive days, these estimates should be more than averagely correct. A few records of singing birds taken at other hours or outside of the area have been included where they seem relevant.

THE AREA COVERED

The area covered in this study consisted of the surroundings of our cabin, a short stretch on a dirt road, and a longer one along a railroad track; both the road and track saw hardly any traffic. Altogether, our measured walk was a little over one mile. The cabin and the land around it had long been abandoned to weeds and many bushes and tangles of brush and young trees were reinvading the once cleared land. These tangled masses provided excellent cover for birds. A large screen of evergreens and larches grew on one side of the cabin while on the other was a gully fed by a very abundant spring which flowed into nearby Maiden Creek. Ancient willows grew by the spring, and around the cabin were a few other large trees such as hickory, ash and mulberry.

Both banks of the creek were thickly bordered by tall, full-grown trees, of which plane trees (sycamore), hickory, oak and linden were the dominant species, with a smaller number of ash, ironwood, elm and hemlock. The railroad track ran on an embankment above the creek. On the landward side of the track were some weedy stretches, two cultivated fields, and some abandoned meadows with clumps of sumac, thorn, and wild grapes. The train passed but three times a day and disturbed the birds very little, while the double line of telegraph wires provided them with convenient and much-used perches.

THE WEATHER

Daily recordings were kept of the temperature, wind, and state of the weather; the temperature was taken usually at 6:30 A. M. before we set out on our walk.

The period of observation was preceded by a long drought. This drought continued practically unbroken throughout the 47 days of observation during which time it rained only five times, with three of these rains being very light. In fact, so dry was the summer that the local crops of corn and potatoes failed.

The majority of the early mornings were hazy, sometimes very much so, and there was little air movement; the latter was recorded only eleven times, and on eight of these there were but faint breezes. We had no way to measure humidity, but, even though the days were very dry, the humidity seemed rather high in the early morning, perhaps due to the lack of air movement in our river bottom. During the cold wave mentioned below, the early mornings were clear and dry.

The temperature at 6:30 A. M. ranged from 58° to 69° F., with the average at 62.14°, up to the 19th of August when it dropped to 51°. The following day it was down to 43° and on the 26th and 27th it was only 40°. The cold wave lasted until the 31st, and during these thirteen days the average was 50.7°. On the first of September the thermometer began to rise again to the level of the first period.

During the period of our observation up to the arrival of the cold spell, the weather was so remarkably even that every morning was a replica of the preceding one. The almost total absence of rain and wind and the evenness of the temperature were ideal for our study as we can assume that the amount of song and activity of the birds were not influenced by the weather until the cold snap came. At that time, the already very small amount of song was still further reduced, and on August 26, when it was only 40°, only two species out of twenty-one were heard. On the following day, only one species was singing *very abundantly*, while four others sang *occasionally*. As the thermometer began to rise again there was a slight increase in song.

THE RECORDS

MOURNING DOVE (6).—During the first twenty-one days up to August 10, the birds were heard on thirteen days, with the average of song *moderate*, except that on July 20 and August 6 the amount was *very abundant* and on three days *abundant*. On August 10, one of these birds began a remarkable series, singing incessantly all that day. On the following day it was hardly heard, but during the next five days it almost never stopped. All the singing was done from one perch. On the five following days (August 17–22) the doves sang *abundantly* on three days and not at all on two. After August 22, they sang only very *moderately*.

The Mourning Dove was one of the earliest singers as well as one of

the latest. On July 26 it was heard at 5:05 A. M. (on the same day a Robin sang his awakening song before 5:00 A. M.). Doves sang also well past twilight. They were seen on every one of the 47 days. Their singing perches were the tops of dead trees or bare branches at the tops of living trees; also, but less often, the cross-bars and the wires of telegraph poles.

CRESTED FLYCATCHER (4).—These birds were silent during the first six days of observation; on the seventh (July 26) and again on July 28, 29 and 30, they were heard *occasionally*. Then followed a long period of silence of seventeen days. They again began to sing on August 17 and on 11 of the next 19 days (August 17 to September 4), they were heard with a *moderate* average.

The Crested Flycatcher was the only one of the species under observation which sang more toward the end of the period although almost silent at the beginning. It was seen every day.

EASTERN PHOEBE (6).—Arthur Cleveland Bent in 'Life Histories of North American Flycatchers, Larks, Swallows and their Allies' (Bulletin 179, U. S. Nat. Mus.), says on page 150: "The bird sings throughout the summer and well into the autumn." Not a day passed when we did not see all of our Phoebes along the creek but, with the exception of July 31 and August 2 and 3, when a few *occasional* calls were heard, we did not hear any song from them the whole of the 47 days of our observation.

EASTERN WOOD PEWEE (2).—Heard on 13 days on a *moderate* average. These days were scattered through the whole period and no pattern is evident. On August 21 and September 4, it was singing *very abundantly*. There were long periods, one of nine days and one of seven, when we did not hear our pewees at all. This does not necessarily mean that other pewees were not singing, for on almost daily visits at 3:00 and 7:00 P. M. to a neighboring bird a quarter of a mile away, where the woods were much denser, we found it singing *abundantly* or *moderately* on practically every occasion. Our pewees were partial to exposed telegraph wires as singing perches. They and the Field Sparrows were our most pleasing songsters.

NORTHERN BLUE JAY (6±).—A small band would visit us, coming down from the woods above. Up to August 5 (17 days), they were seen or heard *occasionally* on only four occasions; after that, up to August 24, they were seen and heard on 12 days out of 18 and during this period they were much noisier. From August 24 on, I have no records of them; they were either completely silent or, what is more likely, they had disappeared.

CROW (12±).—As in the case of the jays, my records are faulty, for I have no entries on Crows for the first ten days. I either failed to notice them or to consider their vocal efforts as 'song,' but they must have been there because from then on they were heard practically every day on a *moderate* average. They had a regular roost near our house in a small dead tree and periodically rediscovered a Broad-winged Hawk that lived near by—which resulted in a great clamor. The Crows would circle with the hawk and swoop at it repeatedly, one bird at a time, until the hawk had to disappear down into the trees, where it was never pursued. Although I observed this performance often, with and without field glasses, I never saw the Crow deliver a blow.

TUFTED TITMOUSE (6±).—A little group passed by, usually at intervals of a few days. They never sang, but kept up a *moderate* amount of chatter on their visits. After August 23, although seen on several occasions, they were always silent except once, on September 3.

HOUSE WREN (5).—On July 26, an individual arrived and sang on endlessly, all day, but was never heard again. On August 19 we discovered a pair in the willows near the cabin, and from then on heard them scold and chatter every day, but they never sang. The same was true of another pair that nested near the tracks. I do not understand why our two pairs did not sing, for a neighbor of ours, during the same period, had a pair with young in the nest, and this pair sang *abundantly* at all hours.

CATBIRD (12 = 6 pairs).—*Very abundant* singers daily until July 31. On August 1, an abrupt change took place and the birds were barely heard; the following day the song was resumed but only *moderately*. From August 3 on, no more song was heard at any time, only calls and scolds, although the birds continued much in evidence. As this observation concerns six pairs, this simultaneous cessation of song was very striking.

The Catbird is a remarkable singer and is not easily daunted when it feels the urge. The song is continuous at times for well over an hour. Once in complete darkness, after 9:00 P. M., a bird sang continuously for more than an hour. Another bird, during a violent thunderstorm at 3:00 P. M. on July 27, took its stand in a lilac bush near our porch and sang on uninterruptedly for half an hour through the heavy downpour. The bird was getting very wet and had to shake off the rain repeatedly, but the song poured out just the same.

ROBIN (4).—Only heard to sing *very abundantly* on the first day of the study (July 20). From then to August 14, they sang every day, with only one or two exceptions, but only on a *moderate* average. They

then became silent and were heard to sing only once more *occasionally* on the 18th. They remained in evidence to the end, but only called or scolded after August 18. As has already been mentioned, they were our earliest singers; they were heard to sing before 5:00 A. M., not only on July 26 but also on August 10.

RED-EYED VIREO (5±).—These birds, noted for their very abundant singing throughout the summer months, did not sing in our territory the way they should have done. Although seen almost every day, they were heard to sing on only six days out of the 47, and only once *very abundantly*—on the coldest day, when it was only 40° F. From July 26 to August 17 (a period of 21 days), they were absolutely silent.

BLACK AND WHITE WARBLER (6).—These birds followed no noticeable pattern. They were not seen every day and were heard only on twelve days scattered throughout the whole period. Only twice, on July 28 and 29, were they heard to sing *abundantly*. The rest of the time they sang *occasionally*. The last songs heard were on August 31 and September 3.

MARYLAND YELLOW-THROAT (6 = 3 pairs).—Very much in evidence every day but only in song during the first eleven days. On three of these days, July 25, 29 and 30, the song was *very abundant*. Then silence came abruptly as in the case of the Catbirds. From July 31 on, with the exception of August 6 and 7 when they were heard *occasionally*, the birds' vocal expression was limited to sharp chips.

CARDINAL (2 = 1 pair).—On the first four days, the male was in full song, singing *very abundantly*. From then on to August 10, the song was abruptly reduced, being limited to *occasional* snatches. During the remaining twenty-six days, only calls were heard with two notable exceptions, on August 19 and 23, when the male again sang *very abundantly* and as loudly as he did in the first few days. The female was never very far from the male, but was never heard to sing.

INDIGO BUNTING (24±).—Easily the most voluble and reliable of our singers. We heard it sing on 41 out of the 47 days and the days when it did not sing were almost all during the cold wave. The song was *very abundant* up to August 3; from this date to August 20 the average was *moderate*. After the cold wave, the song was resumed but on a much reduced scale. On our last day (September 4) one bird was singing *abundantly*, but it was only one out of over two dozen.

It is sometimes tiresome to hear this bird sing because it can go on for hours without stopping, while the song grows harsher and harsher and begins to slur and break. The singing perch is invariably the top-most exposed branch of the tallest near-by tree, and birds that apparently have no trees on their territories will hold forth from the electric wires.

GOLDFINCH ($40 \pm$).—It was hard to estimate the numbers of this cheerful little bird, as small flocks of a half dozen or more were constantly in evidence. They were never silent, and their sweet flight babble came at all hours of the day. They were about as gregarious, vocal and playful at the end of the summer as at the beginning. On two mornings, the full love song was heard, given with great abandon. On both occasions the bird was singing in a hemlock. This song is very canary-like, though perhaps purer than the song of the canary, as it lacks much of the trills of the domestic bird.

RED-EYED TOWHEE (2 = 1 pair).—Up to July 30, the male sang *very abundantly* on four days and *abundantly* on the others. As in the case of the Catbird and Yellow-throat, the song was then abruptly reduced, but not completely stopped, for on six of the next eight days to August 7, the bird sang *occasionally*. From then on it did not sing, but merely called. The species was seen every day.

GRASSHOPPER SPARROW (2 +).—We could be sure of only two birds, as they were so unobtrusive, though there were certainly more of them. These two were visitors to a grassy, weedy patch directly under our windows. We heard them singing only *occasionally* on July 29 and 31, and then, when we had almost forgotten them, they again sang, this time *abundantly*, on August 20 and 24, both days during the cold wave.

CHIPPING SPARROW (8).—Our Chippies sang steadily on a *moderate* average to August 12. After this date, though seen every day, they were completely silent except when one bird sang *occasionally* on August 20. A bird not resident in our territory was quite an individualist. His nest was in an arbor vitae bush a few feet from a small neon beer sign by the highway, and after nightfall he would mount on this blazing perch and sing on continuously.

FIELD SPARROW ($10 \pm$).—This bird was a *very abundant* singer to August 10. As in the case of other species in our study, when the change came on this date it was abrupt, for during the remaining 13 days to August 23, the bird sang only *occasionally* on ten days. After the 23rd it was completely silent. In volubility, the Field Sparrows approached the Indigo Buntings though their song was never vociferous but always very pleasing.

SONG SPARROW ($24 \pm$).—Our birds sang almost every day but only *moderately*. On only seven days they sang *abundantly*. There were a few silent days, mostly during the cold wave. As the cold wave persisted so near to the end of our study, it is difficult to say whether the song would have been resumed later to the same extent as before. The birds did sing after the cold days, but the records are insufficient to draw any conclusions from them. The earliest songs recorded were

at about 5:30 A. M., both in July and August. The bird is an early singer, taking third place in our study, after the Mourning Dove and Robin.

DISCUSSION

In three of the species included in this study, the records are inconclusive since the observations were insufficient; these are the Blue Jay, Black and White Warbler and Grasshopper Sparrow. When we began this study on July 20, in four of the species the individuals under observation apparently had already terminated their period of song or had passed their peak; these are the Phoebe, Tufted Titmouse, House Wren and Red-eyed Vireo. I am aware that in the case of the Phoebe and Red-eyed Vireo this information is contrary to usual expectations. This may be due to an insufficient number of birds under observation. The Goldfinch might also be included among the silent species as its true song was heard twice only, but, on the other hand, the flight song was kept up *abundantly* during the whole period.

After eliminating the above eight species, the thirteen remaining ones fall into four groups:

- A. Silent at first but beginning to resume song in late summer: Crested Flycatcher—August 17 on, a *moderate* singer.
- B. Song terminating abruptly or almost so: Catbird—*very abundant* to July 31; Maryland Yellow-throat—*very abundant* to July 30; Chipping Sparrow—*moderate* to August 12.
- C. Song reaching a peak, then decreasing markedly: Robin—*very abundant* to July 20, tapering off to August 14; Cardinal—*very abundant* to July 25, tapering off to August 9; Red-eyed Towhee—*very abundant* to July 30, tapering off to August 7; Field Sparrow—*very abundant* to August 10, tapering off to August 23.
- D. Song kept up all summer (to September 4): Mourning Dove—*moderate*; Wood Pewee—*moderate*; Crow—*moderate*; Indigo Bunting—*very abundant* to August 3, subsequently *moderate*; Song Sparrow—*moderate*.

It is interesting to note that all the birds that sang throughout the summer are not *very abundant* singers, with an individual exception in the case of the Mourning Dove and, of course, the Indigo Buntings during the first third of the study.

The first day of the cold wave was August 19. The birds in group B and C had already stopped singing long before this date (five out of seven by July 31, the other two on August 10 and 12) so that the termination of song had not been influenced by the weather which, up to the cold period, as I have already mentioned, had been extremely

even. In the birds of group D, all but the Crows were affected by the sudden and unusual cold, having their song very much reduced or eliminated.

SUMMARY

(1) During the middle and late summer of 1944 in Berks County, Pennsylvania, daily records were kept of the amount of song of 21 species of birds. The period covered 47 consecutive days, from July 20 to September 4.

(2) All but one species (Mourning Dove) were passerines, and of the latter, nine families were represented, of which the Fringillidae were the most numerous, with eight species.

(3) The method used is described, and an explanation given of the terms employed in measuring the amount of song.

(4) Records were kept of only the early morning song from dawn to 8:00 A. M. Descriptions of the limited area covered and the state of the weather are given.

(5) The results are correlated in the discussion.

COMMENTS BY MR. ARETAS B. SAUNDERS.

Mourning Dove. Non-passerine birds that sing seem to be more erratic about it than passerine species. Some years I hear a great abundance of Mourning Dove song, most of the summer. In other years they cease early. The same is true of the Cuckoos.

I doubt if the calls of Jays and Crows are properly song. They seem to be not at all seasonal, but used all the year around. They finish nesting early and wander about in late summer, which would account for the erratic records.

The House Wren male sings while feeding young. According to observations of the late Miss Althea Sherman, the song is the stimulus which causes the young, before their eyes are opened, to open their mouths for food. Probably the young of the pairs that did not sing were too old.

It is my observation that Catbirds do not sing while incubating or feeding young, but sing abundantly between the end of nesting and the beginning of molt, which comes about August 1, but why they cease abruptly while Robins taper off I do not understand.

Your observations on Red-eyed Vireos are unusual. I generally find them singing abundantly every day till the second or third week of August. Then there is less song for a week or so, but rarely complete cessation, and an increase of song toward the end of August and a continuance for a few days in September.

The Black and White Warbler ceases nesting and regular singing with the molt in early July. Then it gradually revives singing in late July and August, but never so abundantly as in the nesting season. Your observations evidently began too late to note anything but the revived singing.

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