

the new occupant, Male 3. Still later the 1950 mate of Male 3 returned to, or close to, their old territory; her pairing there was not determined.

Unfaithfulness to territory may have been a factor in two other failures: one male was carried in dead by a cat, at the beginning of a season, at a house about 150 yards from the bird's previous territory; one female, not located until a late nesting, was then about 100 yards from her previous territory. In another case the female returned a few days before her old mate, and possibly was paired before his arrival; it was she who reoccupied the center of the old territory; he shifted a little when he returned. My observations were inadequate to provide explanations of the other two failures.

Kendeigh (*loc. cit.*) concluded that in the House Wren, similarly, "lack of remating is often due to a scattering of birds into other, although nearby, areas, while remating is greatly aided by both birds returning to the same old nesting grounds."—HERVEY BRACKBILL, 4608 Springdale Avenue, Baltimore 7, Maryland.

A Warning Call of the American Robin, *Turdus migratorius*.—In nesting-time, American Robins of both sexes at times utter a high-pitched yet weak-sounding note that closely resembles that of the Cedar Waxwing—a thin 'see-eeep.' When uttering this note, the Robin remains rigid, often for several minutes. It is an alarm, giving warning of a predatory bird or birds, and is intelligible to birds other than Robins, even to domestic poultry. Bent (U. S. Natl. Mus. Bull. 196: 36, 1949) lists no such note.

Six years' observation have failed to show us an instance where this call arose from the presence of an animal, such as a cat or a raccoon. A somewhat confusing factor is that Robins assail predatory birds with outcries similar to those with which they scold their earthbound enemies. We therefore believe the function of the call is to alert other birds.

This belief is strengthened by the behavior of an orphaned robin we reared. This month-old bird uttered the alarm while in a room with drawn blinds. The bird, which had been preening its feathers while perched on my finger, remained tense for a couple of minutes despite my efforts to soothe and relax it.

My wife had been outdoors and when she re-entered, I asked her if she had seen a hawk. She replied that she had been trying to see one, but had failed. When I asked her why she had been trying, she said, "Several robins were 'see-eeeping'."

The next day, while at a window, the young bird again uttered the note. Binoculars showed me a small hawk and two larger hawks in a dead tree, 135 yards distant. To my unaided vision they appeared three specks, but glasses identified them as Goshawks, *Accipiter gentilis*, and a Sharp-shinned Hawk, *Accipiter striatus*. Previously, when 18 days old, this Robin gave the warning faintly, yet recognizably, on seeing a Cooper's Hawk, *Accipiter cooperii*, pass a window.

This young bird supplied the only instances we have had of a juvenile robin uttering this particular alarm note. The call is not chorused as in a general alarm, but is repeated by individuals at scattered points. Not only hawks, but any predatory bird may cause a Robin to utter this alarm. And, though some Robins winter here, we hear it only in nesting-time.—MORRIS JACKSON, R. R. No. 1, Fanny Bay, British Columbia.

Notes on Song Cessation.—When the breeding of a bird population is over, song usually ceases gradually. The first marked decline in the number of daily songs is the beginning of cessation; general cessation marks the end of singing for the

species as a whole, even though a few individuals may sing after this date. This subject has received careful treatment by Saunders (Auk, 65: 19-30, 1948).

From July 5 through August 28, 1950, notes on the song cessation of several species of birds were recorded in the region of Pymatuning Lake, Crawford County, Pennsylvania. During the summer of 1949 songs of the Red-wing, *Agelaius phoeniceus*, were recorded in the same area. Records of the number of songs and of individuals singing were made between 6:30 and 9:30 a. m. when paths were followed on foot along the edge of two small marshes, through three fields with some shrubby growth, and through a deciduous wooded area.

TABLE 1

SONG CESSATION OF BIRDS AT PYMATUNING LAKE, CRAWFORD COUNTY, PENNSYLVANIA

<i>Species</i>	<i>Beginning of cessation</i>	<i>General cessation</i>	<i>Last song</i>
Mourning Dove, <i>Zenaidura macroura</i>	July 13	July 20	July 23
House Wren, <i>Troglodytes aëdon</i>	July 23	July 25	August 12
Catbird, <i>Dumetella carolinensis</i>	July 20	July 23	July 26
Wood Thrush, <i>Hylocichla mustelina</i>	July 25	July 29	July 31
Veery, <i>Hylocichla fuscescens</i>	July 9	July 13	July 13
Red-eyed Vireo, <i>Vireo olivaceus</i>	August 12	August 16	August 26*
Yellow Warbler, <i>Dendroica petechia</i>	July 25	July 28	July 30*
Red-wing, <i>Agelaius phoeniceus</i>	{ July 8, 1949 July 13, 1950	July 22, 1949 July 20, 1950	Aug. 31, 1949 July 26, 1950
Common Goldfinch, <i>Spinus tristis</i>	August 7	August 12	August 28
Song Sparrow, <i>Melospiza melodia</i>	August 12	August 17	August 27

* These records may indicate the revival of song by some individuals after the postnuptial molt.

The beginning of cessation, general cessation, and the last song are recorded for the Mourning Dove, House Wren, Catbird, Wood Thrush, Veery, Red-eyed Vireo, Yellow Warbler, Red-wing, Goldfinch, and Song Sparrow in Table 1. The dates of song cessation check well with the extent of the nesting season given for these species by Todd (Birds of Western Pennsylvania, Univ. Pittsburgh Press, 1940), the dates

TABLE 2

LAST SONGS OF BIRDS AT PYMATUNING LAKE, CRAWFORD COUNTY, PENNSYLVANIA

<i>Species</i>	<i>Last song</i>
Eastern Phoebe, <i>Sayornis phoebe</i>	August 12
White-breasted Nuthatch, <i>Sitta carolinensis</i>	July 25
Yellow-throat, <i>Geothlypis trichas</i>	August 7
Scarlet Tanager, <i>Piranga olivacea</i>	July 13
Henslow's Sparrow, <i>Passerherbulus henslowii</i>	August 13
Eastern Vesper Sparrow, <i>Pooecetes gramineus</i>	July 25
Eastern Field Sparrow, <i>Spizella pusilla</i>	August 12
Swamp Sparrow, <i>Melospiza georgiana</i>	August 13

for song cessation coming somewhat after the majority of the members of a species have stopped nesting activities. In the case of the Phoebe, White-breasted Nuthatch, Yellow-throat, Scarlet Tanager, Henslow's Sparrow, Vesper Sparrow, Field Sparrow, and Swamp Sparrow, insufficient data made the trend of song cessation impossible to chart. Only the dates of last recorded songs of these species are shown in Table 2.

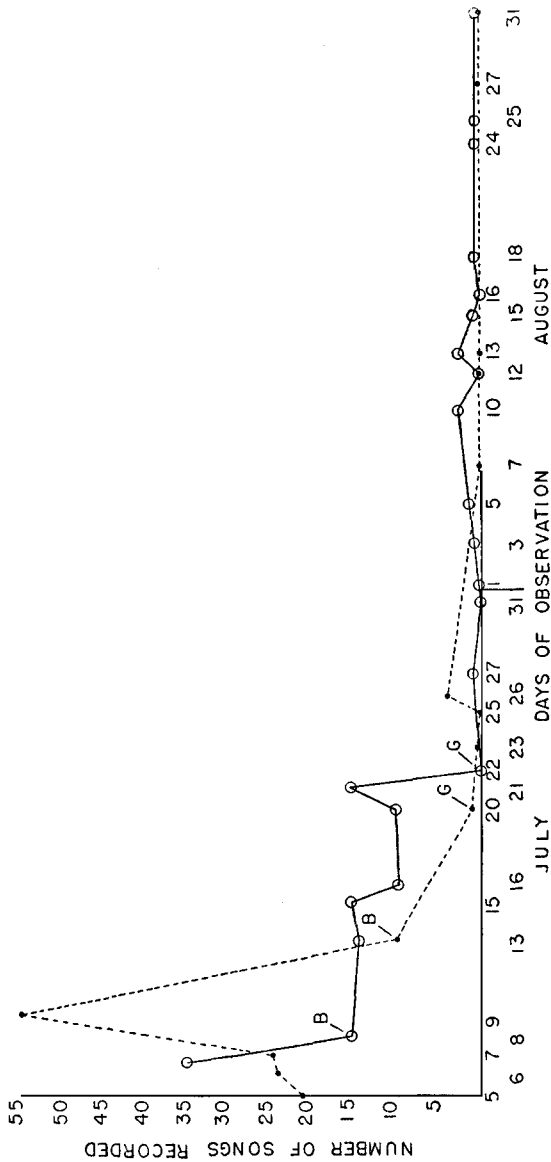


FIGURE 1.—Songs of the Red-wing recorded between 6:30 and 9:30 a. m. Days in 1949 designated by hollow circles; days in 1950, by solid circles. B indicates the beginning of cessation; and G, the general cessation.

There are differences in the period of song decline of the species studied, as little as four days between the beginning of cessation and the last song of the Veery, and as much as three weeks for the House Wren. With the exception of the Veery there were songs recorded for the remaining species after the general cessation. A comparison of the data with those recorded by Saunders (*loc. cit.*) in New York and Connecticut shows a similarity in the period of song decline for most of the species.

It is interesting to note how closely the dates of the beginning of cessation and general cessation approximated each other for the Red-wing during the summers of 1949 and 1950 in the Pymatuning region, only five days difference for the former and two days for the latter. Song decline continued over a ten-day period in 1950, in comparison to the two-week period of 1949. The data concerning the Red-wing are in Table 1 and Figure 1.

On July 26, 1950, the last songs of the summer were recorded for the Red-wing. There is a wide variation between this date and that of 1949 when the last song was heard on August 31. However, the few songs recorded in August of 1949 and the last songs in July of 1951 were often harsh or incomplete or both. These songs recorded from August 5 through August 31, 1949, are of special interest since no song of this species has been recorded so late in the summer. Bicknell (*Auk*, 2: 250, 1885) recorded one on August 3. Harshness was also noted in the last songs of the Yellow Warbler in 1950. There is some question as to whether the dates recorded for the Red-eyed Vireo and Yellow Warbler in Table 1 represent the last song of the summer or a revival of the song after the postnuptial molt. A number of birds revive singing after this molt is over; but certain species revive the song so soon after cessation that distinguishing between the two conditions is difficult (Saunders, *Auk*, 65: 373-383, 1948).

SUMMARY

1. The number of songs was recorded for several species in the Pymatuning area of northwestern Pennsylvania during three-hour intervals in the summer of 1950, and for the Red-wing during the summers of 1949 and 1950.
2. The beginning of cessation and general cessation was determined for ten species, and the last song was recorded for 18 species.
3. The Veery showed the shortest period of song decline, four days, while the House Wren's song declined over a period of three weeks.
4. Several very late songs were recorded for the Red-wing during August, 1949.—
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