Thus four-fifths, or forty, banded in 1939 lived to leave the nests, showing the seasonal increase as a small percentage of about 50 per cent of the eggs laid. Several factors seem to enter into the reasons for this drop from former years' results, markedly shown in the above 1935 tabulation. First-year breeding females arrived in about equal numbers with older females and both were present together to select nest-boxes, which activity was rather retarded, partly owing to an increase of Bluebirds which were slow in nesting, and, until they became settled, kept the Swallows in an interrupted state of agitation. Only one female Swallow was forced to give up her nest-box, however, in favor of Bluebirds. Hence there was none of the separating of mates among the Swallows by first-year females that had happened formerly (see *Bird-Banding*, Vol. VI, pages 33–35). It might seem unusual that the Swallows did not band together in a sort of protective display, as is commonly the case in such an instance. One reason for this lack is plainly seen because of the presence of a pair of Sparrow Hawks nesting in a dead maple stub cavity near by; the Hawks often passed low over the apple orchard, where this concentration of bird-boxes are erected on poles, or alighted in the trees or even on the boxes, presumably watching for mice or insects, which were sometimes caught here. And on such occasions the Swallows never failed to band together for the cause of vociferously pursuing the *Accipiters* until they left for other, quieter foraging grounds. The interesting result, to me, was that the hawk nest-cavity when later examined held no swallow-bands in the pellet-refuse to show that birds had been included in the feeding *menu* for the growing Hawks.

Protocalliphora maggots were common in the nests and were found attached on the eyelids and soft parts of the bills of young even in midday. Most of the parasites matured and went into pupæ by the time the first young Swallows left the nests, since their period of growing to flying was protracted somewhat, as herein noted. It seems certain that the weather-changes were mostly responsible for the lack of enough food at the proper time, which weakened the fledglings and caused their subsequent deaths. It was noticeable that, as a rule, the smaller fledglings survived such conditions better than the larger nestlings. This, of course, was most noticeable when a hot period was followed by wet or damp weather. The young were then the more susceptible to further weakening by the ravages of the blood-sucking maggots. It was at such times that the fledglings in the more advanced size readily succumbed. Also many young died from chilling when the night temperature registered as low as the 30's, especially after the females had ceased night brooding.

In one nest a sixth fledgling matured after the other five had flown, as it then received the required food it had been unable to get owing to its lack of strength. In another nest, on June 22d, there were an addled egg, three dead young in an advanced stage of decomposition, and one living youngster then three-fourths feathered. The male was never seen near the box, the female alone making swift feeding visits. This situation was improved by cleaning out the box and putting in new grass, and the youngster reached the flying stage.—Lewis O. Shelley, East Westmoreland, New Hampshire.

Morning Awakening Time of a Mockingbird.—During the winter of 1935–36 a female Mockingbird (*Mimus polyglottos leucopterus*) wearing Biological Survey band A267254, roosted nightly in a high hedge of Pyracantha only three feet from my bedroom window at Davis, California. Every morning this bird would announce its awakening with a loud series of call-notes from one to five minutes before it left its roosting-perch. Daily observations were made on the exact time at which these outbursts of call-notes would commence. A total of eighty-six observations were recorded between the first of December and the first of April, when the mating-season brought an end to the regularity of the bird's behavior.

By subtracting the awakening time of the bird from the local sunrise time of each observation day, all records were reduced to terms of "minutes before

sunrise." The figures were then compared with official weather records from the University station located one mile away. Humidity, absolute or relative, apparently had very little effect on the awakening time except as it influenced the light-intensity through the formation of clouds. Temperature, in itself, showed no consistent correlation. The slightly earlier average time of awakening observed on colder days was apparently due to the tendency for such days to be more or less cloudless.

Light-intensity is the only factor which consistently showed a positive correlation with the bird's behavior. Bright days brought an early awakening, while dark clouds caused a delay of about ten minutes in the commencement of activity. A photometer was lacking, but four easily distinguishable degrees of light-intensity were recognized: clear mornings of high light-intensity; partly cloudy mornings of fair light-intensity; cloudy mornings of low light-intensity; and very cloudy or rainy mornings of very low light-intensity.

	December	January	February	March
Temperature				
Days colder than average of month	28.6 (20–34) 10	27.2 (22–32) 10	24.0 (16–28) 8	21.1 (13–26) 8
Days warmer than average of month	26.2 (19–32) 12	24.2 (16–30) 10	19.0 (14–26) 10	19.7 (14–26) 6
Humidity				
Days more humid than average of month	25.9 (19–30) 10	22.1 (16–30) 7	17.1 (14–20) 7	21.9 (14–30) 9
Days less humid than average of month	29.4 (20–34) 9	26.5 (16–32) 11	23.6 (16–28) 10	20.6 (17–23) 5
Light-Intensity				
Clear days of high light-intensity	29.0 (27–30) 6	29.3 (28–30) 3	26.0 (24–28) 6	23.4 (17–30) 10
Partly cloudy days of fair light-intensity	27.8 (20–34) 10	27.2 (22–32) 12	20.0 (15–26) 8	19.7 (14–26) 6
Cloudy days of low light-intensity	23.7 (20–30) 6	20.0 (16–24) 3	16.5 (14–18) 4	
Dark days of very low light-intensity	19.0 (19) 1	19.3 (16–22) 3		13.0 (13) 1

AWAKENING TIME OF A FEMALE MOCKINGBIRD UNDER VARIOUS CLIMATIC CONDITIONS AT DAVIS, CALIFORNIA, WINTER OF 1935–1936

In each column the awakening time is expressed in terms of "minutes before sunrise." (Corrected each day for the locality of observation.) The first figure represents the average for the month; the figures in parentheses indicate the extremes occurring during that month; the final figure is the number of observations included in each category.

There was a definite progressive change in the awakening time as the season advanced. In each of the eight weather categories listed in the table the bird awoke later, in relation to sunrise, as the nesting season approached.—JOHN T. EMLEN, JR., University of California, Davis, California.

Eastern Evening Grosbeak Recoveries at Milford, New Hampshire.—On January 3, 1937, a flock of between thirty and forty Eastern Evening Grosbeaks (*Hesperiphona v vespertina*) appeared at the banding station formerly operated by James P. Meltzer, now operated intermittently by me, at Milford, New Hampshire. I succeeded in trapping two, both females, wearing bands.

One (B261619) was originally banded by M. J. Magee, of Sault Ste. Marie, Michigan, on October 12, 1933. This bird was recovered by my father at this station February 24, 1934. (See record in *Bird-Banding*, Vol. V, page 177.) On the above date, January 3d, this bird was recovered for the second time, which fixed its age as at least four years.

The second recovery (34–239910) was also banded by M. J. Magee at Sault Ste. Marie on April 8, 1935.