

## Status of *Myotis lucifugus* in Indiana<sup>1</sup>

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### Abstract

Twelve nursery colonies of the little brown bat, *Myotis lucifugus*, were observed in Indiana during June-August 1969. Seven colonies declined in population while 5 other colonies seemed stable when compared to previous data. Samples were taken from each colony for banding and the numbers of remaining bats were estimated, giving an estimated total population.

In the past few years much has been written about the decline of animal populations. Bats in particular have been included in this decline (1, 2). The senior author suspected this decline but had no documented evidence. The junior author devoted the past summer to a study of 12 well-established nursery colonies of *Myotis lucifugus*. The results of this study are in Table 1. Seven colonies declined in population while five colonies seemed to have a stable population.

TABLE 1. *Population decline in 7 nursery colonies of Myotis lucifugus in Indiana.*

Colony	No.	First Date	No. Bats	Last Date	No. Bats	Banded	% Decrease
Reelsville	1	8 Aug 59	600	12 Aug 69	0	3197	100%
Brookville	2	23 Aug 60	650	20 Jul 69	0	647	100%
Newbern	3	22 Aug 60	850	13 Aug 69	0	2751	100%
Shoals	4	28 Aug 58	1133	13 Aug 69	275	unknown	76%
Milroy	5	27 Jul 62	800	2 Jul 69	125	1586	84%
New Castle	6	12 Aug 58	1000	15 Aug 69	35	1239	96%
Pennville	7	20 Jul 65	1060*	22 Jul 69	581*	1719	48%

\* Evening count.

The breakdown of the seven colonies showing a declining population is as follows:

Three colonies were completely gone from the nursery sites. One of these was built out; one was exterminated with 50% DDT dust; the third colony left because \$10.00 worth of mothballs was tacked up in their roosting areas. Over the past 10 years, 6,595 bats were banded in these colonies.

The fourth colony decreased approximately 76% over the past 11 years, probably due to exterminators using DDT dust in the roost and to attempts to asphyxiate the bats with automobile exhaust fumes. Flying bats and dead bats were seen; it is unknown how these bats remained alive. The strength of the DDT is unknown.

The fifth colony decreased 84% over the past 6 years. The owner informed us that physiologists from a university had been taking banded and unbanded bats each year for their experiments. They also took females from the nursery colony before the young had dropped. The authors are convinced that there needs to be better cooperation between

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researchers so that one set of research efforts is not destroyed by another. A total of 1,586 bats have been banded in this colony.

The sixth colony declined 96%, reason unknown. The seventh colony had a 48% reduction, reason unknown, in spite of the fact that this population has been examined (by evening counts) more critically than any other in the state.

#### Literature Cited

1. HUMPHREY, S. R. 1964. Extermination at Indiana *Myotis lucifugus* nurseries. Bat. Res. News 5(4):34.
2. MUMFORD, R. E., and J. B. COPE. 1964. Distribution and status of the Chiroptera of Indiana. Amer. Midland Natur. 72(2):473-489.