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## BATS OF ULSTER COUNTY

A Preliminary Report, with Notes on Banding

by Daniel Smiley

Human reaction to bats is a strange mixture of abhorrence and fascination. These tiny beasts have become involved with man's affairs out of all proportion to their size, if not their numbers. A fine book by Glover M. Allen, "Bats", published twenty-five years ago, devotes five chapters to the folklore and literature about bats and their "uses" to humans, even as pets and food! Recent sensational accounts of bats as spreaders of disease have made them newsworthy.

The purpose of this article is to put on record the preliminary results of Ulster County studies of the animal, and to try to present a fair picture of the interrelationship of people and bats in this part of the State. No attempt will be made to describe the different species, or cover the most interesting life histories of the family Chiropidae (bats). Some helpful reference books are listed at the end.

For 30 years Fred Hough and the writer have been observing Ulster County bats. A few specimens have been preserved in my Mohonk collection, and notes of occurrence were made, but we have not yet had the time for a detailed study of this animal. Our information on local bats was greatly augmented in 1961 by the banding work done by Dr. Wayne H. Davis, then teaching at Middlebury College, Vermont.

Like bird banding, the marking of bats with numbered metal bands is helping zoologists to learn more about their life histories and activities. Regular bird bands, issued especially for this purpose by the Fish and Wildlife Service, are used. Bands are clamped loosely around the forearm bone of the wing. This does not interfere with the bat's flight, and makes the band more visible than a leg band would be, when the animal is roosting, thus assuring more recovery records.

Bat species may be separated into two basic life patterns - those that hibernate in winter and those that migrate to the southern states like migratory birds. As with so many generalities, this one does not tell the whole story. Banding has shown that in the northeast, at least, some of our "hibernating" species make considerable journeys before retreating for their winter rest. In New England Drs. Davis and Hitchcock banded thousands of Little Brown Bats at summer roosts in buildings and caves. A considerable number of these little animals, from as far away as Cape Cod, winged their way back to favored mines in Vermont to spend the winter. (Green Mountain State Chambers of Commerce may quote!)

Chiropterophiles (bat lovers) locate possible roosts by studying State Geological Surveys and Mining Maps. Such a search revealed our locally famous cement mines to the Middlebury biologists. They wrote me, asking about possible colonies of bats. I started making inquiries. In the meantime, members of the "Met Grotto" of the National Speleological Society had reported to Dr. Davis a good colony of bats near Rosendale.

On November 5th, 1961, Fred Hough and I had the welcome opportunity to join Dr. Davis and one of his students for a day of banding at an abandoned cement mine east of Fifth Binnewater Lake. Several thousand bats were found roosting on the roof of two galleries about two hundred yards from the entrance. The temperature was low enough so that they were quite lethargic. Thus, when brushed from the roof with bamboo poles, they could be picked up and put in fishnet cages. Gloves were worn to avoid possibility of infectious bites.

The cages were removed to the mine entrance for banding. As the bats were released, they flew back into the mine, though many first did a few circles outside in the broad daylight. Bats have no trouble navigating in daytime, even in sunlight.

On 17 March 1962 the mine was visited again for banding. The numbers on bands of bats already banded were not recorded. A random sample contained:

	<u>Males</u>	<u>Females</u>
Banded	45	52
Non-banded	85	88

Dr. Davis' comment was: "Since we banded about all we could find on November 5, it seems there was quite a turnover of individuals. Total population was about the same. This is a typical finding." This means that in the cold weather period between November and March there had been a considerable exchange of individuals between this hibernating place and other mines or caves in the vicinity.

The details of the banding are given in the following table:

Bat Banding at 5th Binnewater

		5 Nov. '61	17 Mar. '62	Total
Myotis l. lucifugus (Little Brown)	M	1,065	140	2,254
	F	911	138	
Myotis keenii septentrionalis (Keen's Myotis)	M	-	3	3
	F	-	-	
Myotis sodalis (Indiana Myotis)	M	1	2	6
	F	1	2	
Myotis subulatus leibii (Small footed Myotis)	M	-	2	5
	F	-	3	
Pipistrellus subflavus obscurus (Eastern Pipistrelle)	M	-	2	4
	F	1	1	
Eptesicus f. fuscus (Big Brown)	M	2	23	77
	F	11	41	
Total		1,992	357	2,349
		M	1,068	1,240
		F	924	1,109

Up to the present, the following recoveries of banded bats from Binnewater Mines have been reported. Since bats live a long time, the chance of securing additional records is good. Should you find banded bats in Ulster County or vicinity, I would be glad to have them, live or dead - living ones preferred. For your own safety, use gloves (rubber, leather, or heavy cotton are satisfactory) when handling live bats.

See Table I, Page 4

The benefits of bats to humans are well understood by ecologists, but are not sufficiently tangible to be obvious to the average person. They are a part of the balance of nature, and have a proper place in the scheme of things. They do benefit man's economy directly in their consumption of vast quantities of insects, many of them harmful. It is true that their destruction of mosquitoes has probably been overrated.

On the other hand, bats have benefitted greatly from human activities in the northeast. Man has provided beautiful church steeples (and other buildings) for roosting, and fine mines for hibernation! It is believed that as a result of the above, the Little Brown Bat is far more numerous in this area than it was three hundred years ago.

TABLE I  
 Little Brown Bat Recoveries  
Myotis l. lucifugus

Banded at: Binnewater Mine, 2 mi. N. Rosendale, Ulster Co., N.Y.  
 by Dr. W. H. Davis and Dr. H. B. Hitchcock.

Sex	Recovery Date	Place	Distance & Direction	Remarks
		<u>Banded 5 Nov. '61</u>		
F	Nov.-Dec.-'61	Hopewell Junc., N.Y. Dutchess County	24 SE	Found dead by Mr. D. Nestler.
F	18 Apr. '62	New Paltz, N.Y. Ulster County	8 SE	Bat dead in home, Mrs. Anna VanKleeck.
M	22 Apr. '62	Binnewater, N.Y. Ulster County	0.1 --	Found dead along RR, Miss V.L. Edwards.
M	5 June '62	Poughkeepsie, N.Y. Dutchess County	14 SE	Found dead in garden, Mrs. R. Hauck
M	24 June '62	Olive Bridge, N.Y. Ulster County	5 NW	Captured by Mr. Joseph Snares
F	15 July '62	South Salem, N.Y. Westchester Co.	49 SE	Found by Mr. M. Clark
M	7(-) July '62	Pawling, N.Y. Dutchess County	32 ESE	Captured by D'Agostine.
F	20 <sub>+</sub> Aug. '62	Monticello, N.Y. Sullivan County	33 WSW	Killed in woodshed, Mr. R. Stambaugh.
M	20 Sept. '62	Lake Katrine, N.Y. Ulster County	11 N	Destroyed by Mr. E. P. Beaver
F	15 Oct. '62	Berlin Township, Pa. Wayne County	54 WSW	Killed by Mr. A. Kreller
		<u>Banded 17 March '62</u>		
F	11 May '62	Augusta, N.J. Sussex County	57 SW	Caught & released by Mr. P. Ramming.
M	3 June '62	Bedford Village, N.Y. Westchester County	50 SE	Killed by Mr. F. W. Quay.
F	20(-) June '62	Southfields, N.Y. Orange County	41 S	Captured by Mr. E. M. Kelly

Unfortunately bats come in conflict with human interests. The use of buildings by colonies sometimes becomes objectionable, due to smells and noise. It is true that their mere presence is enough irritation to some people, whose understanding of bats is based only on folklore. If local colonies of bats become objectionable, the writer would be glad to try to advise on ways of evicting them.

The superstition that bats carry "bedbugs" is untrue, as far as this insect concerns humans. They do sometimes act as host to a blood-sucking insect related to the human bedbug.

The latest scare about bats is that they may be carriers of rabies. This is true, but deserves some qualifying statements, lest we be carried away by such "purple prose" as appeared in Time Magazine a year and a half ago. Bats can harbor the rabies virus, just as can any warm-blooded animal. The danger of acquiring rabies from bats is slight, compared to one's chances of getting it from dogs, cats, foxes, skunks, or even horses!

For transmission of this disease, it would be necessary for a person to be bitten by a rabid bat. Our Ulster County bats have such small mouths and short teeth that there is little hazard, even if one does come in contact with one of these diseased animals. However, caution is in order, so handle bats, dead or alive, only with gloves. Those who enter caves or mines used by bats subject themselves to two possible hazards, - direct contact with bats, and the possibility of air transmission of disease (which has not as yet been proved to occur). Therefore, due precautions should be taken.

Check List of Ulster County Bats

<u>a) Records vouched by specimens:</u>	<u>Date</u>	<u>Locality</u>
<u>Myotis l. lucifugus</u> Little Brown Bat	23 June 1953	Mohonk Lake
<u>Myotis keenii septentrionalis</u> Keen's Myotis Bat	(Banded 17 Mar. '62)	5th Binnewater
<u>Myotis sodalis</u> Indiana Myotis Bat	5 Nov. 1961	5th Binnewater
<u>Myotis subulatus leibii</u> Small-footed Bat	5 Nov. 1961	5th Binnewater
<u>Pipistrellus subflavus obscurus</u> Eastern Pipistrelle Bat	24 Apr. 1954	Mohonk Lake
<u>Eptesicus f. fuscus</u> Big Brown Bat	30 July 1933	Mohonk Lake
<u>Lasiurus b. borealis</u> Red Bat	29 Aug. 1957	Lomontville

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b) Probably sometime will be added to the List:

Lasionycteris noctivagans  
Silver-haired Bat

Lasiurus c. Cinereus  
Hoary Bat

Note:

The difficulties of bat identification prevent the use of sight records for determination of distribution of the above species within the county. More specimens will have to be taken to accomplish this. We have seen bats from Tidewater on the Hudson River to the summit of Slide Mountain.

Literature

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