

Kroger Hill Report 1992  
second half report  
August 1 to November 15, 1992

Submitted by:  
Graham F. Petri

During the second half of the 1992 portion of the Kroger Hill Study, three samples have been made. The data and conclusions are presented in the pages to follow.

The methods employed have been referred to in the previous reports of this study.

Summer Plot # 4    Grid Size 5 x 6

Prairie Grass Area near barn  
Dates sampled: August 11 to August 21, 1992  
Total of 10 days  
(i.e. 300 trap nights)

Results:

	Catches	Marked	Animals/100 Trap Nights
Total Captures	13	10	4.33
Microtus	12	9	4.
Peromyscus	0	0	
Mus	1	1	0.33

Fall Plot # 1    Grid Size 5 x 6

Prairie Grass Area near barn  
Dates sampled September 14 to September 26  
Total of 10 days in this interval.  
(i.e. 300 trap nights)

Results:

	Catches	Marked	Animals/100 Trap Nights
Total Captures			
Microtus	12	11	4.33
Peromyscus	0	0	
Mus	5	5	1.66
Blarina	1	1	0.33

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Total of 10 days in this interval.

(i.e. 300 trap nights)

Results:

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Peromyscus	0	0	
Mus	5	5	1.66
Blarina	1	1	0.33

Fall Plot # 2 Grid Size 5 x 6

Meadow at bend in road.

Dates Sampled October 19 to October 31

Total of 10 days in this interval  
(i.e. 300 trap nights)

Results:

	Catches	Marked	Animals/100 Trap Nights
Total Captures	11	10	3.67
Microtus	1	1	0.333
Peromyscus	1	1	0.333
Mus	9	8	3.00
Blarina	1	1	

	Peromyscus	Microtus	Mus	Zapus	Blarina
Plot # 1 Summer	0.61	5.15	0.0	0.91	0.0
Plot # 2 Summer	22.0	2.33	0.0	2.0	0.0
Plot # 3 Summer	6.33	4.67	15.00	0.0	0.0
Plot # 1 Fall	0.0	4.33	1.66	0.0	
Plot # 2 Fall	0.333	0.333	3.0	0 0	0.0

During the second half of study three more samples were obtained at Kroger Hill.

The major observations are:

- 1) The Prairie grass area is inhabited by Microtus which is expected. Peromyscus will not enter this area
- 2) Peromyscus numbers high at beginning of summer are dropping as Microtus increases.
- 3) Microtus pennsylvanicus is increasing in number. We have the highest numbers in the last three years.
- 4) Mus musculus is reaching appreciable levels.

Conclusions

The major conclusion that can be reached after the total data for all years is considered is if the Park Board still wants a meadow conducive to Microtus, and therefore to a barn owl family, it should cut, plow, disk and seed with prairie grass or a mixed grass. Every time the county seeded, the area became more meadow-like and more conducive to whatever a meadow would permit.

The present habitat is very different from any native meadow or successional area. The area is basically a very heterogeneous pasture and is different enough from native habitat to permit Mus, an opportunistic non-native to reach appreciable levels.

Peromyscus has once again left or is leaving the area as Microtus begins to peak.

I believe we have enough data to write a short paper on small mammal populations interactions in a managed or altered area.

I thank the County of Hamilton and it administration for permitting and funding the research. It has been very helpful in providing research experience for Xavier senior students.

Thank you,

*Graham F. Petri*  
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