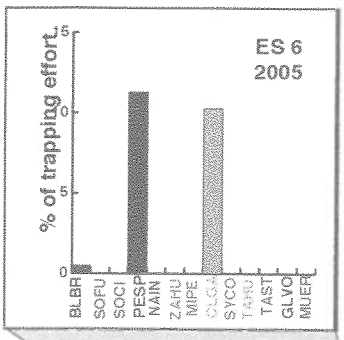
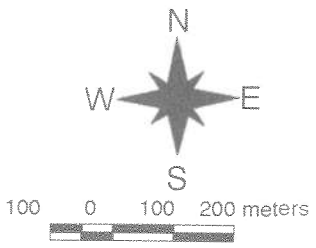
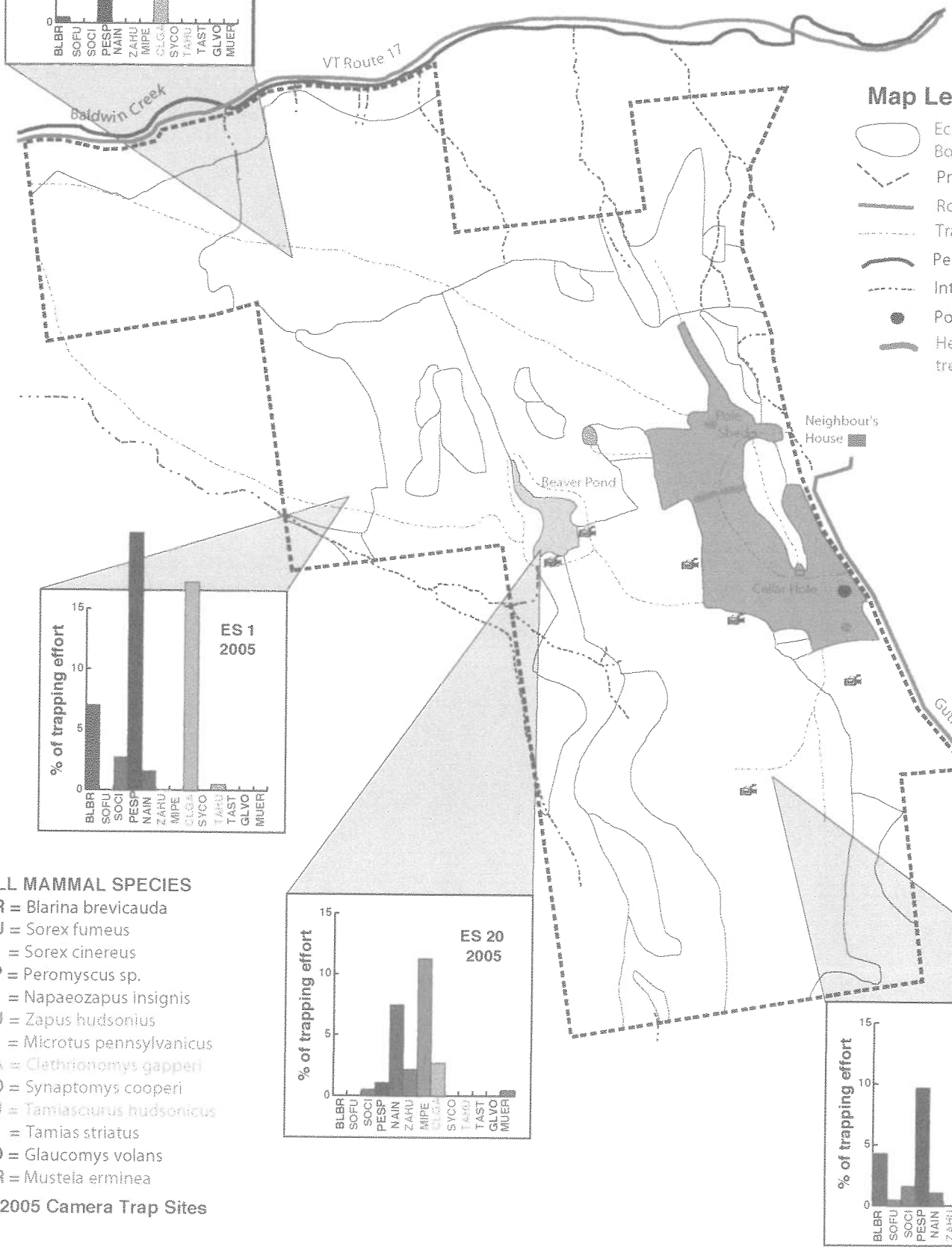
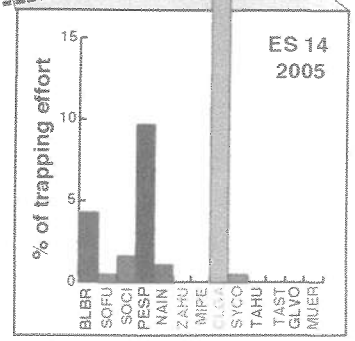
Figure 1--Map of Guthrie-Bancroft 2005 survey sites. Bar graphs show occurrence of small species as percent of trap effort (trap nights) Compare with data in Table 1.2.







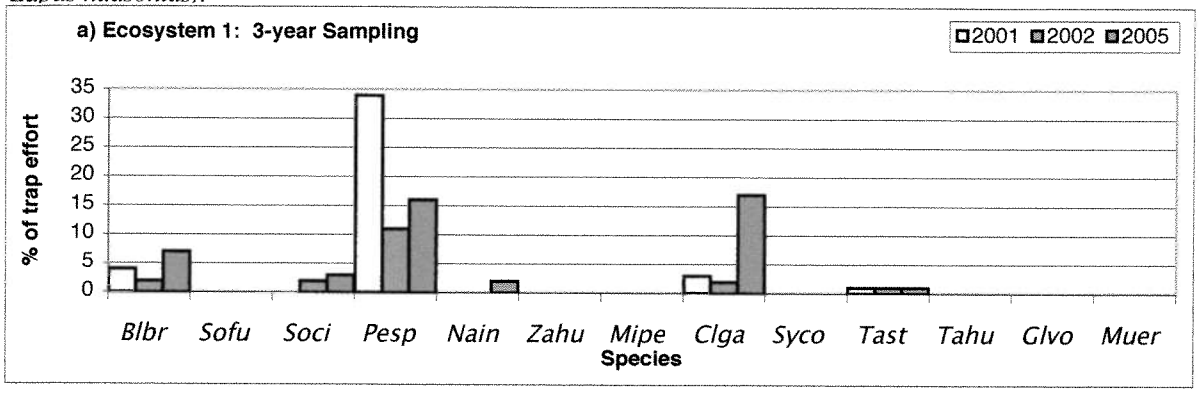


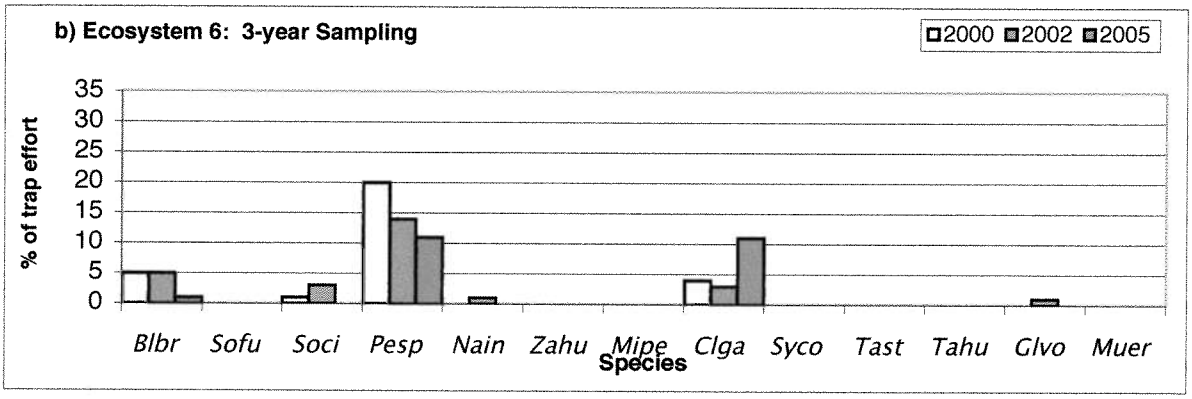
SMALL MAMMAL SPECIES

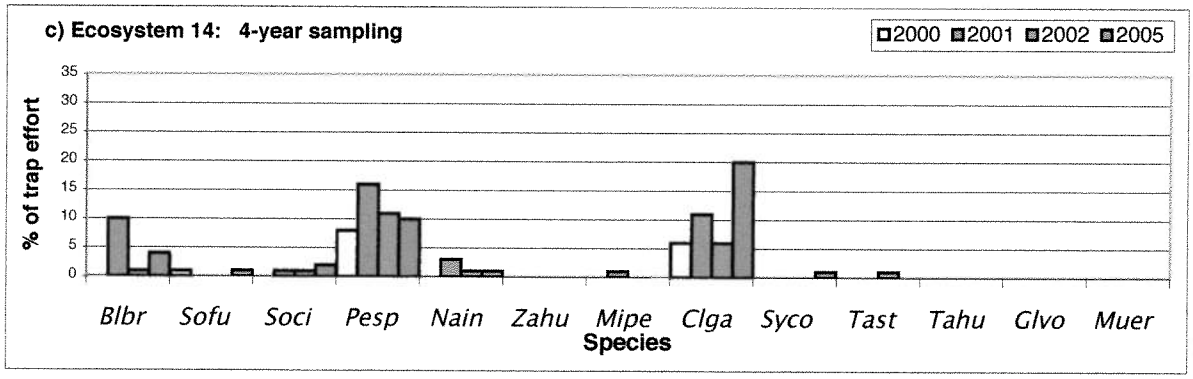
BLBR = Blarina brevicauda
SOFU = Sorex fumeus
SOCI = Sorex cinereus
PESP = Peromyscus sp.
NAIN = Napaeozapus insignis
ZAHU = Zapus hudsonius
MIPE = Microtus pennsylvanicus
CLGA = Clethrionomys gapperi
SYCO = Synaptomys cooperi
TAHU = Tamiascurus hudsonicus
TAST = Tamias striatus
GLVO = Glaucomys volans
MUER = Mustela erminea

= 2005 Camera Trap Sites

Figure 2--Distribution of Small Mammals in the Guthrie-Bancroft Ecosystems sampled in 2000, 2001, 2002, and 2005. Bar graphs express percent of trapping effort in each ecosystem (Species accronyms: *Blbr = Blarina brevicauda, Clga = Clethrionomys gapperi; Glvo = Glaucomys volans; Mipe = Microtus pennsylvanicus; Muer = Mustela ermineaNain = Napeozapus insignis; Pesp = Peromyscus sp.; Sofu = Sorex fumeus; Soci = Sorex cinereus; Syco = Synaptomys cooperi; Tast = Tamias striatus; Tahu = Tamiasciurus hudsonicus; Zahu = Zapus hudsonius).*







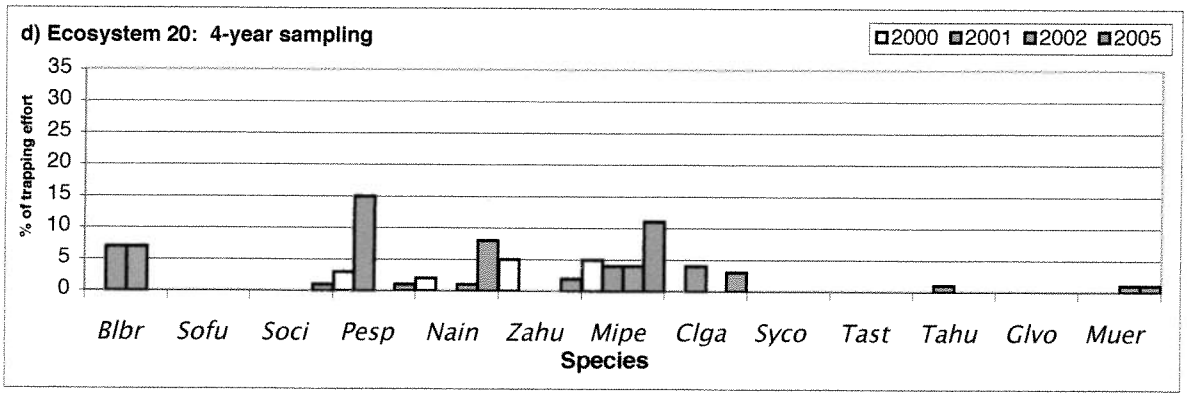
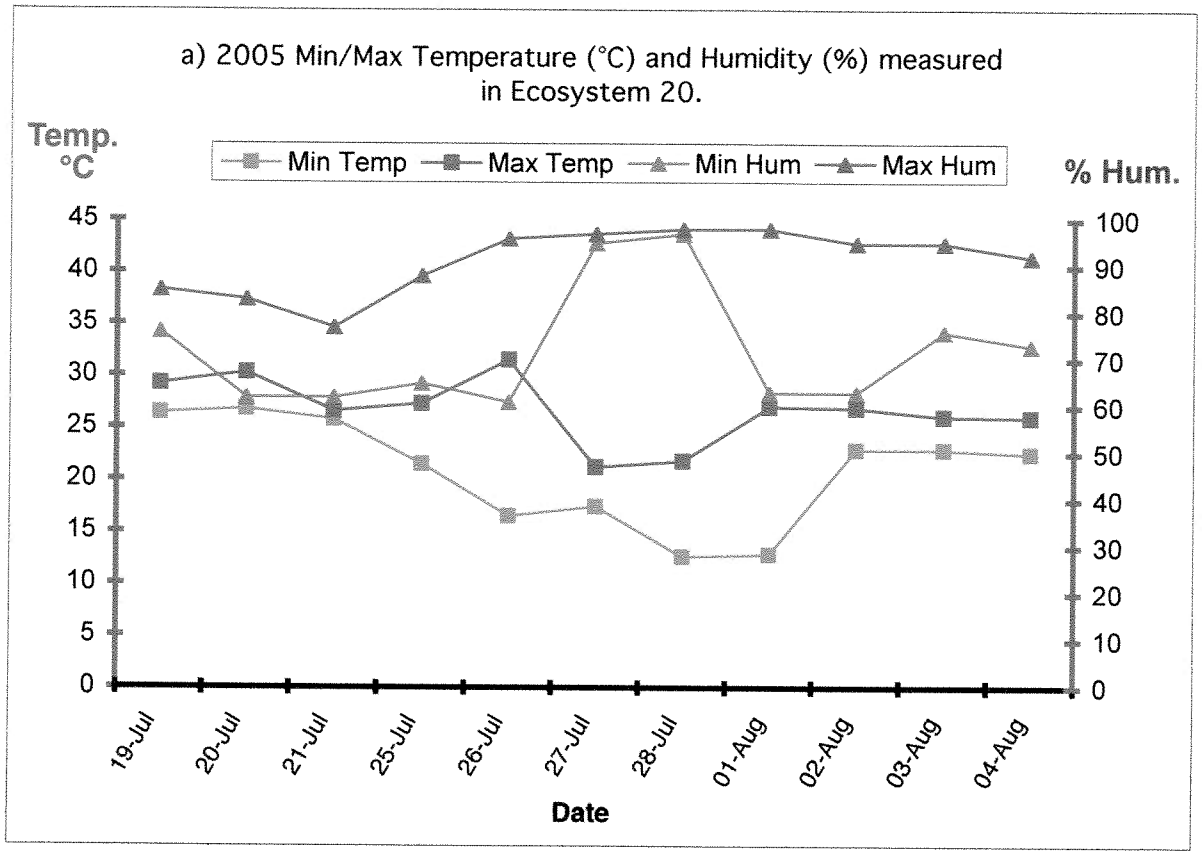


Figure 3--Meteorological Data recorded in Ecosystem 20 from 19 July to 4 August 2005



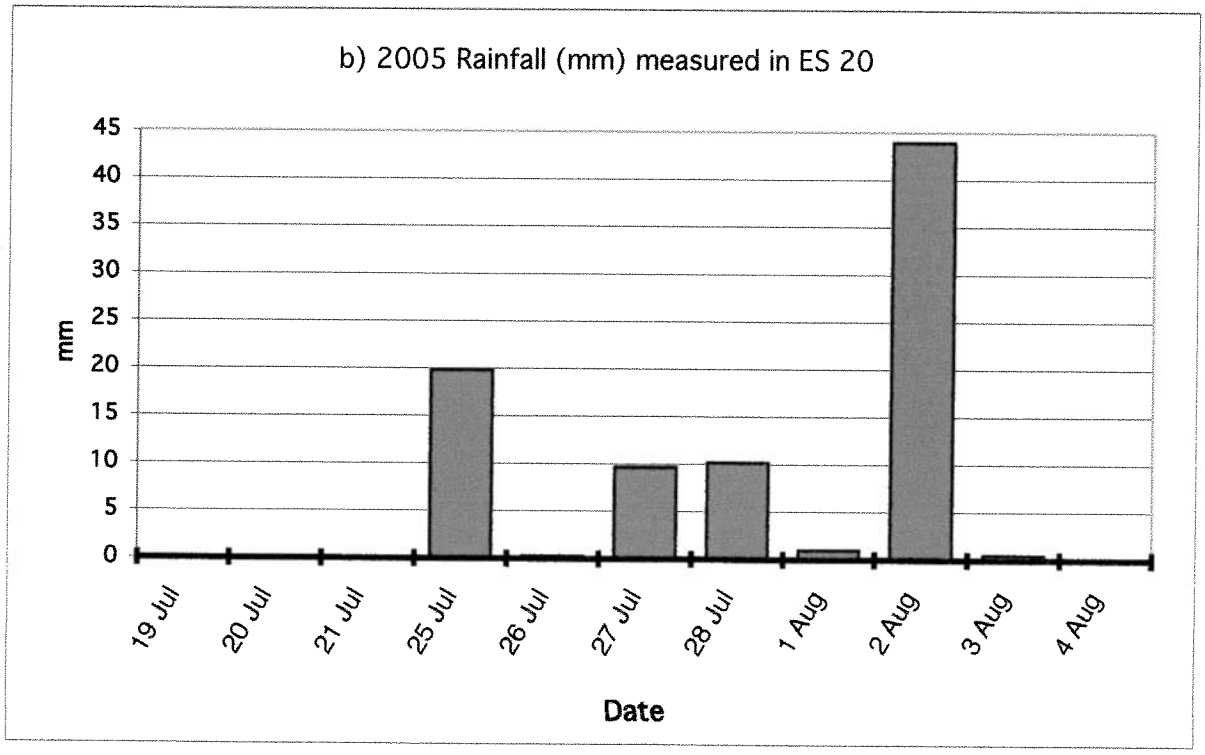


Figure 4-- 2005 Microhabitat Data from trap sites summarized by Ecosystem.

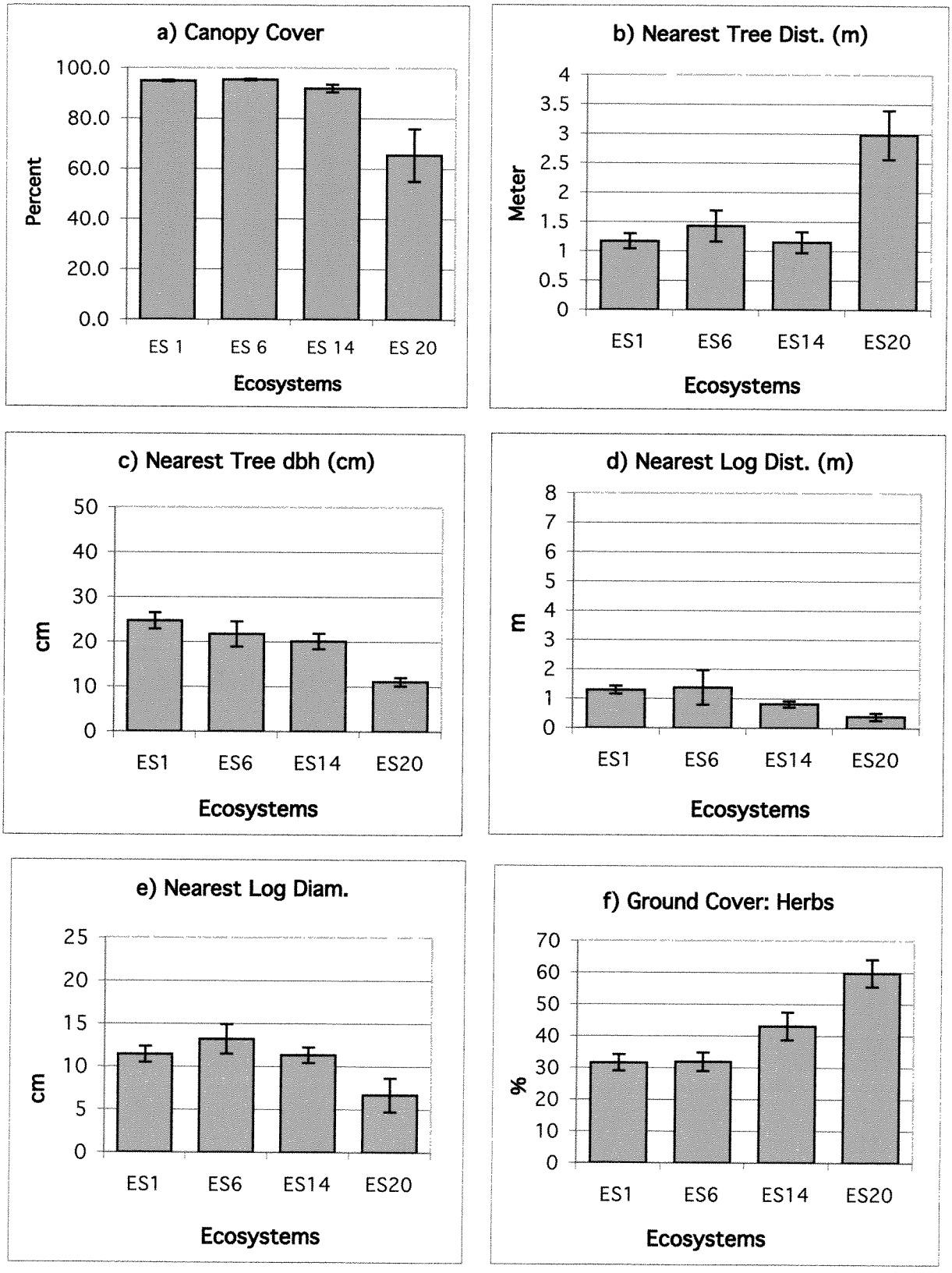
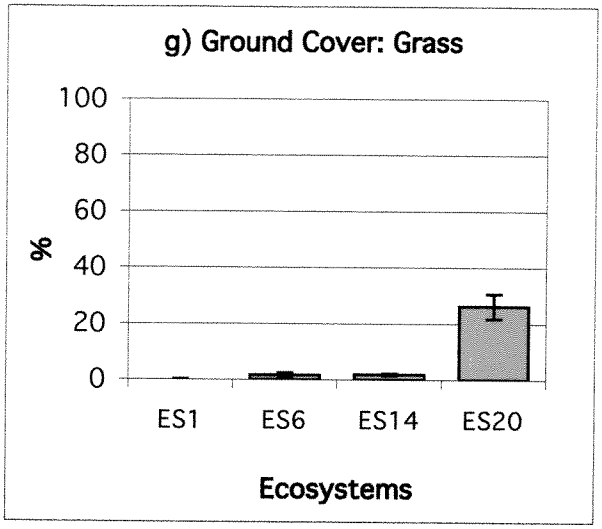
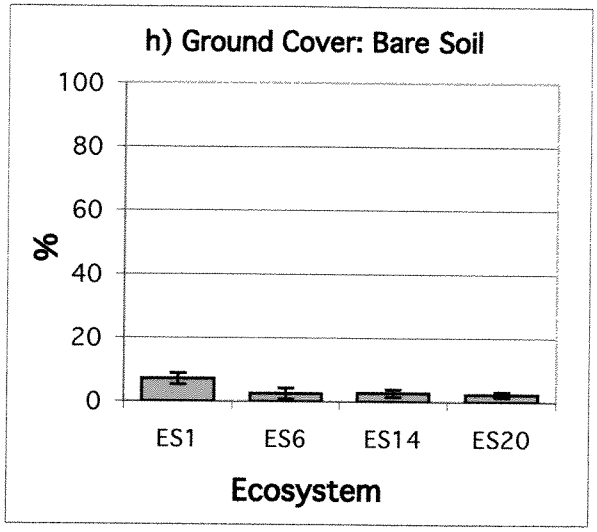
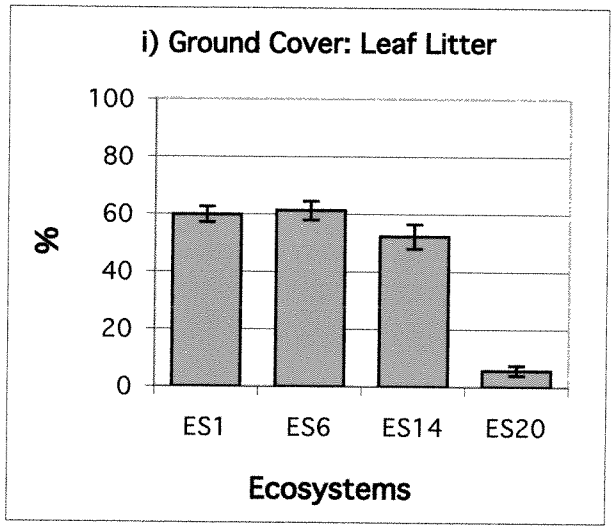


Figure 4 contd.--2005 Microhabitat Data summarized by Ecosystem







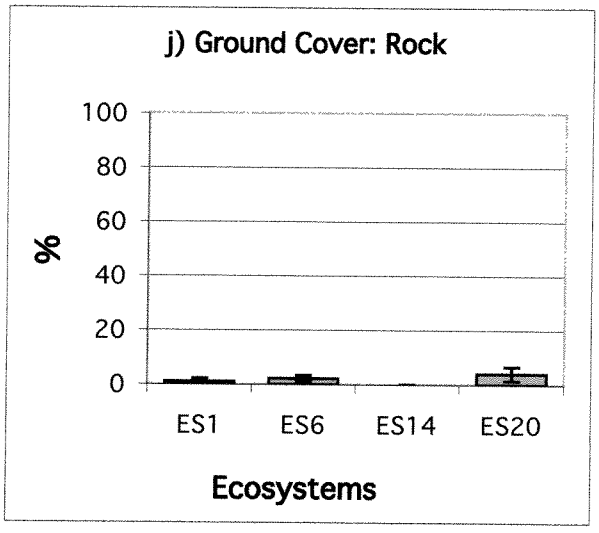


Figure 5-- 2005 Microhabitat Data from trap sites summarized by Small Mammal Species. Species abbreviations and sample sizes are: *Blbr* = *Blarina brevicauda* (n=22), *Clga* = *Clethrionomys gapperi* (n=19), *Mipe* = *Microtus pennsylvanicus* (n=3), *Muer* = *Mustela erminea* (n=1), *Nain* = *Napaeozapus insignis* (n=7), *Pesp* = *Peromyscus* sp. (n=88); *Soci* = *Sorex cinereus* (n=9), *Sofu* = *Sorex fumeus* (n=1), *Syco* = *Synaptomys cooperi (n=1)* ; and *Tast* = *Tamias striatus* (n=1), *Zahu* = *Zapus hudsonicus* (n=1).

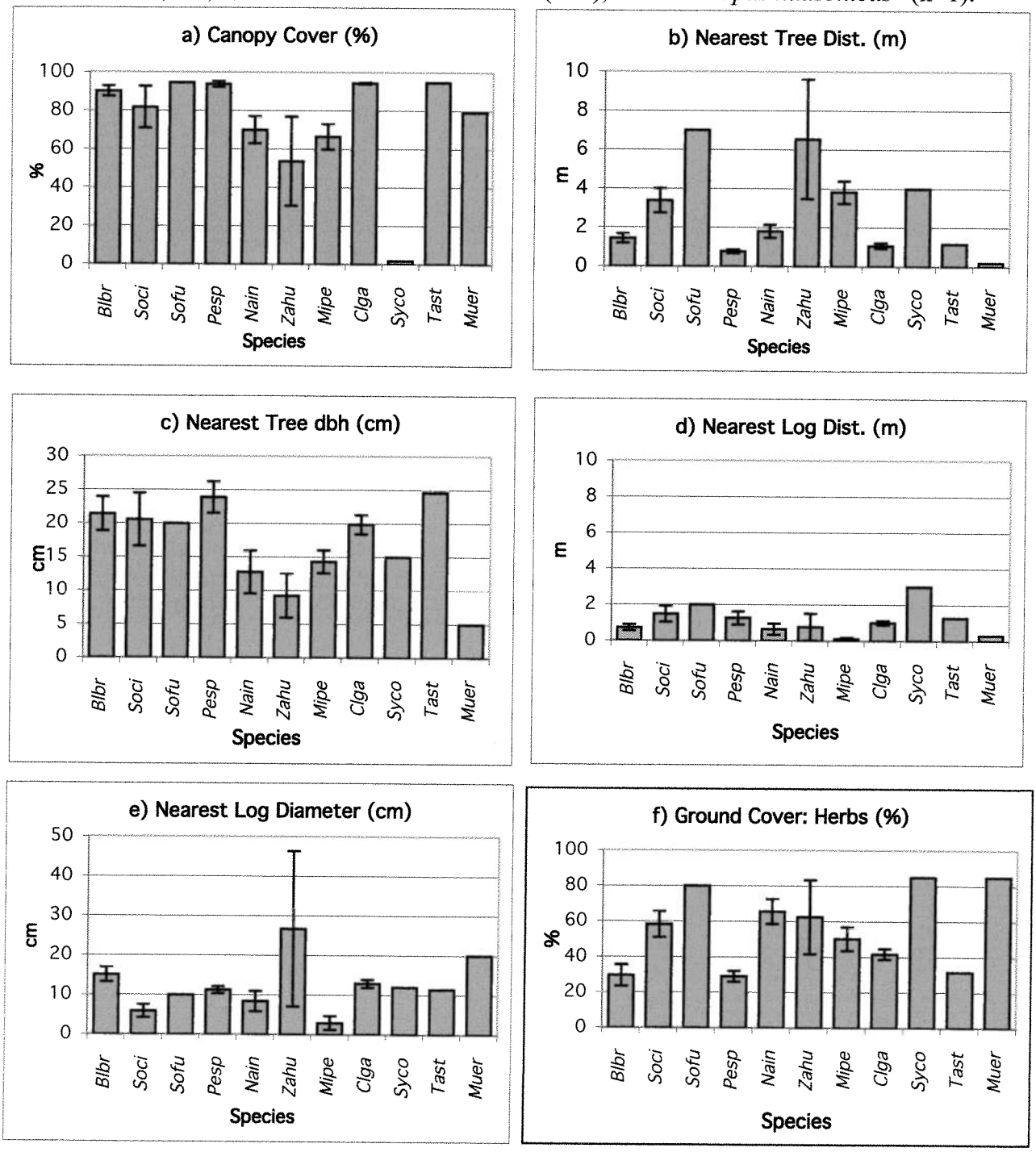


Figure 5-- 2005 Microhabitat Data summarized by Small Mammal Species.

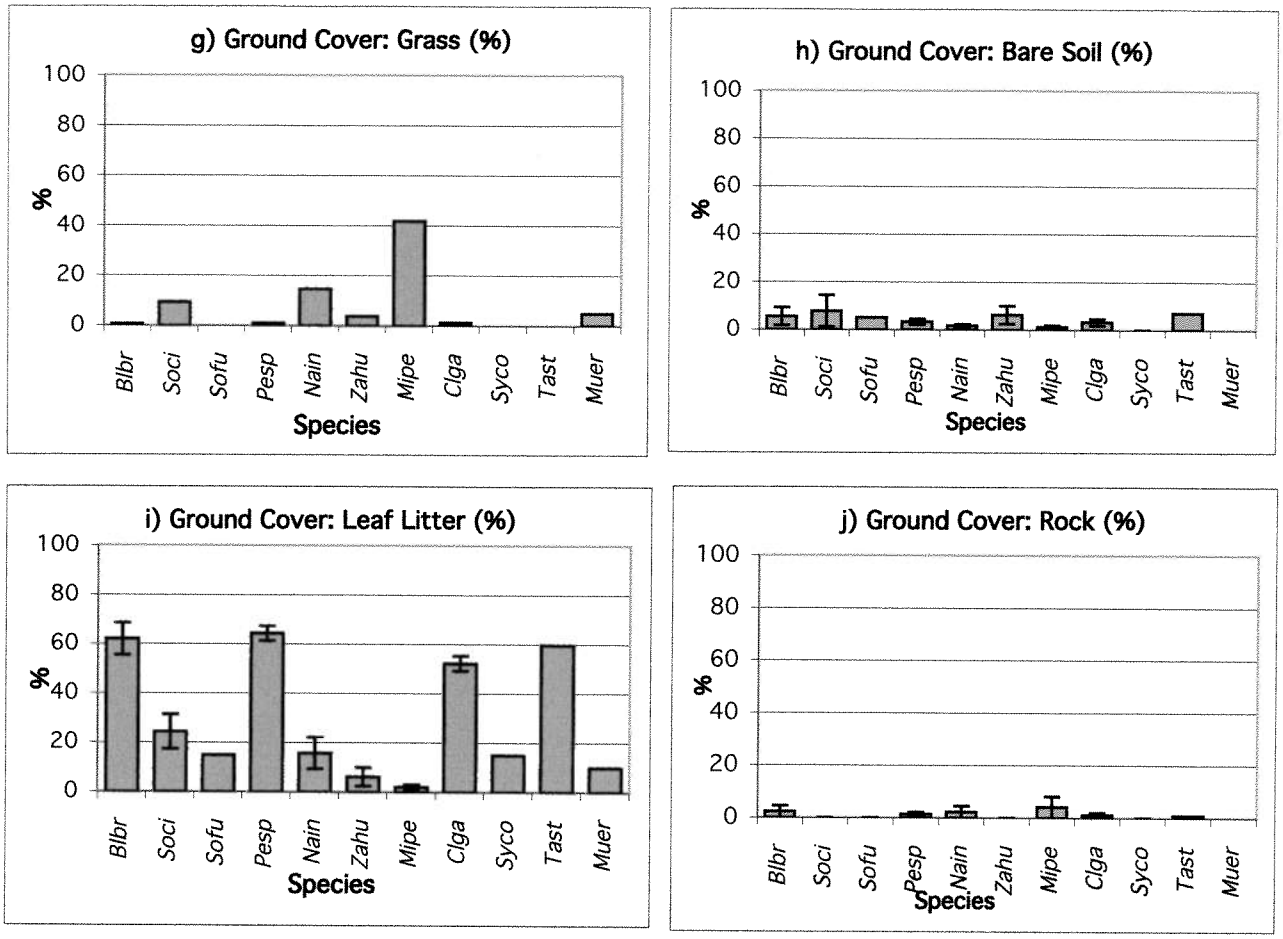


Table 2--Mean multi-annual (3 or 4 -year) relative abundances (RA) and their standard errors (SE) of each small mammal species and two diversity indices in the four ecosystems sampled, and analysis of variance. Asterisks (*) indicate statistically significant differences.

	ES 1 well-drained mesic red oak hardwood forest		ES 6 seepy terrain rich northern hardwood forest		ES 14 poorly drained spruce fir north. HW forest		ES 20 alder swamp/sedge meadow, edgeof former beaver pond		ANOVA		
	RA	SE	RA	SE	RA	SE	RA	SE	*F*	*P*	
Blarina brevicauda	0.042	0.015	0.034	0.014	0.039	0.022	0.035	0.02	0.651	0.691	
Sorex fumeus	0	0	0	0	0.005	0.003	0	0	1.586	0.279	
Sorex cinereus	0.015	0.008	0.012	0.009	0.009	0.003	0.001	0.001	1.213	0.399	
Peromyscus sp.	0.204	0.071	0.152	0.025	0.11	0.017	0.05	0.071	9.0882	0.005	*
Napaeozapus insignis	0.005	0.005	0.004	0.004	0.01	0.005	0.026	0.017	0.9709	0.506	
Zapus hudsonius	0	0	0	0	0	0	0.018	0.012	1.5961	0.277	
Microtus pennsylvanicus	0	0	0	0	0.002	0.002	0.06	0.018	4.3152	0.038	*
Clethrionomys gapperi	0.074	0.049	0.06	0.024	0.108	0.034	0.016	0.009	5.5511	0.02	*
Synaptomys cooperi	0	0	0	0	0.013	0.013	0	0	0.803	0.598	
Tamias striatus	0.006	7E-04	0	0	0.001	0.001	0	0	5.0237	0.026	*
Tamiasciurus hudsonicus	0	0	0	0	0	0	0.003	0.03	1.0556	0.465	
Glaucomys volans	0	0	0.002	0.002	0	0	0	0	1.0556	0.465	
Mustela erminea	0	0	0	0	0	0	0.005	0.003	1.3066	0.364	
Simpson's 1-D	0.935	0.031	0.969	0.007	0.968	0.011	0.984	0.006	3.232	0.075	
Shannon-Wiener H'	1.011	0.204	0.897	0.081	1.004	0.173	0.87	0.121	1.219	0.396	

Table 3--Correlation matrix with r^2 values of simple correlations using means of 2-year habitat and 3 or 4-year small mammal data with at least 8 data points in four ecosystem on the Guthrie-Bancroft land. Bold-faced values indicate high positive or negative correlations.

	Blbr	*Soci*	*Pesp*	*Clga*	*Nain*	Canopy Cover	Leaf	Herbs	Grass	Rock
Blarina brevicauda		0.050	0.109	0.092	-0.012	-0.038	0.003	0.051	-0.091	-0.564
Sorex cinereus			0.008	0.082	0.002	0.110	0.410	-0.406	-0.273	-0.032
Peromyscus sp.				-0.016	-0.208	0.396	0.916	-0.872	-0.729	-0.030
Clethrionomys gapperi					-0.010	0.723	0.061	0.000	-0.149	-0.456
Napaeozapus insignis						-0.005	-0.502	0.229	0.818	0.455
Canopy Cover							0.352	-0.434	-0.149	0.024
Leaf								-0.859	-0.826	-0.056
Herb									0.525	-0.008
Grass										0.346
Rock										

Appendix II

Overview: Small mammal trap captures on the Guthrie-Bancroft parcel, Colby Hill, Lincoln, Vermont 2000, 2001, 2002 and 2005. Numbers reflect captures rather than separate individuals because they include some recaptured individuals.

Ecosystem (ES) No.	**1** well-drained mesic red oak hw forest			**2** well-drained northern hw forest w/ white pine	**6** seepy terrain rich northern hw forest			**7** well-drained transitio n hw forest	**8** steeply sloping hem-lock forest	**9** ±exc. drained north. hw forest w/ acid knoll outcrop.	**10** small stream riparian, yellow birch-sugar maple-white ash forest	**12** mod. well-drained yellow birch north. hw forest	**14** poorly drained spruce-fir northern hw forest				**18** poorly drained red maple-black ash swamp	**20** alder swamp/sedge meadow edge of former beaver pond				**22** un-main-tained old-fields	**25** Along small intermittent cold-mountain stream			**26** along perma-nent cold moun-tain stream	**Totals**
ES Type:																												
Year:	**2001**	**2002**	**2005**	**2000**	**2000**	**2002**	**2005**	**2000**	**2000**	**2001**	**2002**	**2000**	**2000**	**2001**	**2002**	**2005**	**2001**	**2000**	**2001**	**2002**	**2005**	**2000**	**2000**	**2001**	**2002**	**2000**	-
No. of nights trapped	4	3	**3**	3	3	3	**3**	3	3	4	3	3	3	4	3	**3**	4	3	3	3	**3**	3	3	4	3	3	**83**
No. of Traps	32	56	**62**	26	52	58	**62**	20	32	28	26	52	52	30	59	**62**	32	20	28	24	**62**	20	26	30	58	20	**1029**
Trapnights	128	168	**186**	78	156	174	**186**	60	96	112	78	156	156	120	177	**186**	128	60	84	72	**186**	60	78	120	174	60	**3239**
Shrews:																											
Blarina brevicauda	5	3	**13**	2	8	8	**1**	2		4		4		12	2	**8**	4		6	5		10	7	6	8		**118**
Sorex fumeus								1		1			2			**1**											**5**
Sorex cinereus		3	**5**		1	5				1				1	2	**3**					**1**						**22**
Rodents:																											
Peromyscus sp.	44	19	**29**	12	31	25	**21**	8	4	20	24	28	12	19	19	**18**	16	2	13		**2**	1	1	13	2	2	**385**
Napeozapus insignis			**3**	2		2		1	2		3			3	1	**2**	2	1		1	**14**	1	6	8		2	**54**
Zapus hudsonius																		3			**4**						**7**
Microtus pennsylvanicus														1		**1**	2	3	3	3	**21**	3	4	1			**42**
Clethrionomys gapperi	4	3	**32**	1	7	5	**20**		5	18	1	5	10	13	10	**38**	17		3		**5**			6		3	**206**
Synaptomys cooperi																**1**											**1**
Tamias striatus	1	1	**1**	3						3					1										1		**11**
Tamiasciurus hudsonicus																			1								**1**
Glaucomys volans						1																					**1**
Carnivores:																											
Mustela erminea																				1	**1**						**2**
No. of Species	4	5	**5**	5	4	6	**3**	4	3	6	3	3	3	6	6	**7**	5	4	5	4	**7**	4	4	5	3	3	**12**
No. of Captures	54	29	**83**	20	47	46	**42**	12	11	47	28	37	24	49	35	**72**	41	9	26	10	**48**	15	18	34	11	7	**855**
Trap Success	0.42	0.17	**0.45**	0.26	0.30	0.26	**0.23**	0.20	0.11	0.42	0.36	0.24	0.15	0.41	0.20	**0.39**	0.32	0.15	0.31	0.14	**0.26**	0.25	0.23	0.28	0.06	0.12	**0.26**