

Ecological Archives M080-018-A1

Pälvi Salo, Peter B. Banks, Chris R. Dickman, and Erkki Korpimäki. 2010. Predator manipulation experiments: impacts on populations of terrestrial vertebrate prey. *Ecological Monographs* 80:531–546.

Appendix A. Predator manipulation studies included in the meta-analysis.

TABLE A1. Predator manipulation studies included in the meta-analysis. Replication of the experiment RU: r = replicated or u = unreplicated experiment. Type of response, Rtype: R= reproduction, P = population size or both. Experiment type: SEC = simultaneous experimental and control areas, BA = before-and-after design, NE = natural experiment. Treatment: rem = removal of predators, add = increase in predator density. Experiment manipulation type, Mtype: open or enclosure. Efficiency of the predator manipulation (i.e., demonstrated change in predator densities), E: high or low. Cyclicity of prey species, C: yes or no. Predator/prey mass ratio, Pw. Effect size is calculated as $\ln(X_e/X_c)$, where X_e and X_c are the treatment and control prey responses. GLM denotes those experiments that were included in the generalised linear model selection process.

No	Reference	RU	Rtype	Location	Experi-ment type	Treat-ment	Mtype	E	Prey origin	Prey type	Pred. origin	Predator type	C	Pw	Spatial scale (km ²)	Temporal scale (months)	Effect size $\ln(X_e/X_c)$	GLM
1	Ahola et al 2006	r	P	Europe	SEC	rem	open	high	native	frog	intro	mink	no	38.65	1.07	72	0.51	x
2	Baines 1991	r	R	Europe	SEC	rem	open	.	native	grouse	native	.	no	.	.	24	0.55	.
3	Balser et al. 1968	r	both	N America	BA/ SEC	rem	open	high	native	ducks	native	corvids, raptors, mesopredators, weasel etc.	no	3.20	77.47	36	-0.10	x
4	Banks et al 1998	r	P	Australia	SEC	rem	open	high	intro	rabbit	intro	red fox	no	2.57	10	19	1.83	.
5	Banks et al 1999	r	P	Australia	SEC	rem	open	high	native	small rodent	intro	red fox	no	61.67	10	19	0.62	x
6	Banks et al 2000	r	both	Australia	SEC	rem	open	high	native	large marsupial	intro	red fox	no	0.11	10	19	3.09	x
7	Banks et al. 2004	r	P	Europe	SEC	rem	open	high	native	small rodents	intro	mink	yes	31.83	1.07	60	1.44	x
8	Bartmann et al. 1992	u	R	N America	BA	rem	open	.	native	deer	native	coyote	no	0.21	140	36	0.26	x
9	Beasom 1974	u	both	N America	SEC	rem	open	high	native	deer	native	coyote, bobcat	no	0.15	21.86	18	0.93	x
10	Blackwell 2003	u	P	Australia	SEC	rem	open	high	intro	small rodent	intro	stoat	yes	3.59	7.5	35	0.59	.
11	Bolton et al. 2007	r	both	Europe	BA	rem	open	low	native	wader	native	red fox, crow	no	17.41	2.16	42	0.09	x
13	Boonstra et al. 2001a	u	P	N America	SEC	rem	excl	high	native	small rodent	native	lynx, coyote, red fox	no	38.23	1	89	-0.91	x
12	Boonstra et al. 2001b	u	P	N America	SEC	rem	excl	high	native	small rodent	native	lynx, coyote, red fox	yes	347.58	1	80	-0.14	x
14	Byrom et al. 2000	u	both	N America	SEC	rem	excl	high	native	small rodent	native	lynx, coyote, red fox	yes	24.05	1	63	1.17	x
15	Chesness et al. 1968	u	R	N America	SEC	rem	open	.	intro	grouse	native	mesopredators, corvids	no	1.86	10.36	28	0.51	.
16	Clark et al. 1995	r	R	N America	SEC	rem	open	low	native	ducks	native	crow	no	0.58	10.2	4	0.18	x
17	Cuthbert 2002	u	R	N Zealand	BA	rem	open	.	native	seabird	intro	stoat	no	0.56	4.2	18	-0.51	x
18	Desy and Batzli 1989	r	both	N America	SEC	rem	excl	high	native	small rodent	native	carnivores, raptors, owls, snakes	yes	87.87	0.0013	6	0.89	x
19	Dilks 1999	u	P	N Zealand	SEC	rem	open	high	native	passerine	intro	stoat	no	7.40	0.5	51	0.20	x
20	Dion et al. 1999	r	R	N America	SEC	rem	open	.	native	passerines	native	mesopredators	no	121.47	41	24	0.03	x
21	Duebbert and Lokemoen 1980	u	both	N America	SEC	rem	open	.	native	ducks	native	mesopredators	no	6.39	259	28	0.43	x
22	Edminster 1939	u	both	N America	SEC	rem	open	low	native	grouse	native	raptors, owls, mesopredators etc.	no	2.50	8.61	42	-0.03	x
23	Ekerholm et al. 2004	u	P	Europe	SEC	rem	excl	high	native	small rodent	both	weasels, red fox	yes	51.91	0.02	7.5	0.26	.
24	Erlinge 1987	u	P	Europe	SEC	rem	excl	high	native	small rodent	native	weasels, mesopredators, owls, raptors	no	55.90	0.005	8	0.68	x
25	Evans et al. 2006	u	P	N America	BA	rem	open	high	native	ungulate	native	wolf	no	0.25	1 500	110	0.48	x
26	Frey et al. 2003	r	P	N America	SEC	rem	open	low	intro	grouse	native	coyote, mesopredators	no	4.92	25.95	31	0.52	.
27	Garrettson and Rohwer 2001	r	both	N America	SEC	rem	open	low	native	ducks	native	coyote, mesopredators, weasel etc.	no	5.90	41.5	5	0.41	x
28	Garrettson et al. 1996	r	R	N America	SEC	rem	open	low	native	ducks, coot, passerine	native	coyote, mesopredators	no	8.22	41.5	5	0.40	x
29	Gasaway et al. 1992	u	both	N America	BA	rem	open	low	native	ungulate	native	wolf, grizzly bear	no	0.21	9 700	108	0.58	x
30	Graham and Lambin 2002	r	P	Europe	SEC	rem	open	low	native	small rodent	native	weasel	yes	2.81	0.085	25	0.00	x

31	Greenwood 1986	r	R	N America	SEC	rem	open	high	native	ducks	native	skunk	no	2.04	2.21	28	1.68	x
32	Greenwood et al. 1990	r	R	N America	SEC	rem	excl	high	native	ducks	native	mesopredators, ground squirrel	no	5.11	0.1	65	3.37	x
33	Guhery and Beasom 1977	u	P	N America	SEC	rem	open	high	native	ungulate, grouse, small rodents	native	coyote, bobcat, mesopredators	no	43.09	2.25	19	0.34	x
34	Hambäck et al. 2004	r	P	Europe	SEC	rem	open	high	native	small rodent	native	weasels, raptors, foxes	yes	61.35	0.0095	36	0.64	x
35	Harris and Wanless 1997	u	P	Europe	BA	rem	open	high	native	wader	native	gulls	no	1.76	0.57	180	1.23	x
36	Hatter and Janz 1994	u	both	N America	BA	rem	open	high	native	ungulate	native	wolf	no	0.57	2 400	96	0.57	x
37	Hayes et al. 2003	u	both	N America	SEC	rem	open	high	native	ungulates	native	wolf	no	0.16	20 000	50	-0.01	x
38	Henke and Bryant 1999	r	P	N America	SEC	rem	open	high	native	small rodents, rabbits	native	coyote	no	9.03	50	22	2.05	x
39	Hodges et al 2001	u	P	N America	SEC	rem	excl	high	native	hare	native	lynx, coyote, red fox	yes	6.71	1	108	0.17	x
40	Huitu et al. 2005	r	P	Europe	SEC	rem	excl	high	native	small rodent	native	weasels, owls, kestrel	yes	4.48	0.005	13	-0.22	x
41	Imber et al. 2000	u	R	N Zealand	BA	rem	open	.	native	seabird	intro	rat	no	0.55	0.014	120	0.40	x
42	Innes et al. 1999	u	both	N Zealand	SEC	rem	open	high	native	passerine	intro	weasels, rat, mesopredators	no	5.46	9.14	96	0.57	x
43	Jackson 2001	r	R	Europe	SEC	rem	excl	high	native	waders	intro	hedgehog	no	5.79	0.59	3	1.63	x
44	Janermo and Liberg 2005	u	P	Europe	BA/NE	rem	open	high	native	deer	native	red fox	no	0.30	3	60	0.84	x
45	Kauhala 2004	r	R	Europe	SEC	rem	open	low	native	ducks	both	mesopredators	no	5.01	82.83	48	0.46	.
46	Kauhala et al. 1999	r	P	Europe	SEC	rem	open	low	native	hare	both	mesopredators	no	1.25	82.83	48	-0.40	.
47	Kauhala et al. 2000	r	both	Europe	SEC	rem	open	low	native	grouse	both	mesopredators	no	2.80	79.75	48	0.86	.
48	Kay et al. 1994	r	P	Australia	SEC	add	open	high	intro	small rodent	native	raptors	no	42.78	0.69	6	0.57	.
49	Kinnear et al. 1998	r	P	Australia	SEC	rem	open	high	native	medium marsupial	intro	red fox	no	0.77	2.95	108	2.29	x
50	Kinnear et al. 2002, case 1	u	P	Australia	BA	rem	open	.	native	medium marsupial	intro	red fox	no	0.77	32.03	72	3.38	x
50	Kinnear et al. 2002, case 2a	u	P	Australia	BA	rem	open	.	native	medium marsupials	intro	red fox	no	1.74	22	96	2.86	x
50	Kinnear et al. 2002, case 2b	u	P	Australia	BA	rem	open	.	native	medium marsupial	intro	red fox	no	1.39	1.14	102	2.50	x
50	Kinnear et al. 2002, case 3	u	P	Australia	BA	rem	open	.	native	medium marsupials	intro	red fox	no	1.39	.	52	0.87	.
50	Kinnear et al. 2002, case 4	u	P	Australia	BA	rem	open	.	native	medium marsupials	intro	red fox	no	1.74	120	120	3.05	x
50	Kinnear et al. 2002, case 5	u	P	Australia	SEC	rem	open	high	native	medium marsupials	intro	red fox	no	1.39	31	56	3.13	x
51	Klemola et al. 1997	r	R	Europe	SEC	rem	open	high	native	small rodents	native	weasels, owls, kestrel	yes	4.48	2.58	10	1.13	x
52	Klemola et al. 2000	r	P	Europe	SEC	rem	excl	high	native	small rodents	native	weasels, owls, kestrel	yes	4.48	0.005	9	1.39	x
53	Korpimäki and Norrdahl 1998	r	P	Europe	SEC	rem	open	low	native	small rodents	native	weasels, owls, kestrel	yes	5.61	2.5	10	0.47	x
54	Korpimäki et al. 2002	r	P	Europe	SEC	rem	open	high	native	small rodents	native	weasels, owls, kestrel	yes	6.43	2.5	21	0.95	x
55	Korpimäki et al. 2005	r	P	Europe	SEC	rem	open	high	native	small rodents, shrew	native	weasels, owls, kestrel	yes	6.83	2.5	21	0.47	x
56	LaGrange et al. 1995	u	R	N America	SEC	rem	excl	high	native	ducks	native	weasels, mesopredators	no	4.07	0.21	96	1.23	x
57	Lindell and Forsman 1996	r	P	Europe	SEC	both	open	.	native	small rodent	native	snake	yes	1.48	0.01	12	0.21	x
58	Lokemoen and Woodward 1993	r	R	N America	SEC	rem	fence	high	native	ducks	native	mesopredators	no	4.80	0.1215	50	1.83	.
59	Lokemoen et al. 1982	r	R	N America	SEC	rem	excl	.	native	ducks	native	mesopredators, ground squirrel	no	6.62	0.0853	40	1.00	x
60	Lomolino 1984	r	both	N America	SEC	add	open	low	native	small rodent	native	shrew	no	0.46	0.0025	4	0.22	x
61	Lovegrove 1996	u	both	N Zealand	SEC	rem	open	high	native	passerine	intro	rat	no	4.00	16.3	60	0.62	x
62	Mahon 1999	u	P	Australia	SEC	rem	open	high	native	small marsupials and rodents	intro	red fox, cat	yes	120.07	12	21	0.65	x
63	Major et al. 2006	u	both	N America	SEC/ NE	(rem)	open	high	native	seabird	intro	rat	no	3.13	.	28	-0.12	.
64	Marcström et al. 1988	r	both	Europe	BA/ SEC	rem	open	high	native	grouse	native	red fox, marten	no	3.28	21	48	0.50	x
65	Marcström et al. 1989	r	P	Europe	BA/ SEC	rem	open	high	native	hare	native	red fox, marten	no	1.47	21	48	0.33	x
66	Martin et al. 2001	u	P	N America	SEC	rem	excl	high	native	grouse	native	lynx, coyote, red fox	yes	16.99	0.36	101	-0.81	x
67	Martin and Joron 2003	u	R	N America	SEC	rem	open	high	native	passerines	intro	red squirrel	no	6.22	2.49	72	0.79	x
68	Mayer and Ryan 1991	r	R	N America	SEC	rem	excl	low	native	wader	native	carnivores, small rodents	no	77.74	0.017	15	0.54	x
69	McKinney et al. 2006	u	P	N America	BA	rem	open	low	native	ungulate	native	cougar	no	0.69	87	54	0.93	x
70	Meserve et al. 1996	r	P	S America	SEC	rem	excl	high	native	small rodent	native	owls, fox	yes	19.87	0.0056	51	0.07	x
71	Millus et al. 2007	u	R	N America	BA	rem	open	high	native	seabird	native	deer mouse	no	0.19	0.0028	4	0.11	x
72	Moorhouse et al. 2003	r	both	N Zealand	SEC	rem	open	.	native	parrot	intro	stoat, possum, rats	no	1.75	34.8	48	0.24	x

73	Nie and Liu 2005	r	both	Asia	SEC	rem	excl	high	native	small rodent	native	weasels, raptors, foxes	no	155.99	0.0015	30	0.66	x
74	Nordström et al. 2002	r	P	Europe	SEC	rem	open	high	native	waterfowl	intro	mink	no	0.56	1.07	72	1.24	x
75	Nordström et al. 2003	r	P	Europe	SEC	rem	open	high	native	passerines, gulls, waders	intro	mink	no	4.36	1.07	72	0.60	x
76	Nordström et al. 2004	r	R	Europe	SEC	rem	open	high	native	seabird	intro	mink	no	11.33	1.07	72	1.23	x
77	Norrdahl and Korpimäki 1995	r	P	Europe	SEC	rem	open	high	native	small rodents, shrew	native	kestrel, owl	yes	5.06	3	41	0.09	x
78	Norrdahl and Korpimäki 1996	r	P	Europe	SEC	rem	open	high	native	small rodents	native	kestrel, owl	yes	2.91	3	41	0.04	x
79	Norrdahl and Korpimäki 2000	r	both	Europe	SEC	rem	open	high	both	small rodents, grouse, shrew, passerines	native	weasels, owls, kestrel	yes	0.78	3	25	0.67	.
80	Norrdahl et al. 2004	r	P	Europe	SEC	rem	open	high	native	small rodents	native	weasels, owls, kestrel	yes	3.98	2.5	31	0.81	x
81	Parker 1984	u	both	Europe	SEC	rem	open	high	native	grouse	native	corvids	no	0.73	3.72	40	0.61	x
82	Pearse and Ratti 2004	r	R	N America	SEC	rem	open	.	native	duck	native	coyote, mesopredators	no	6.21	41	17	0.37	x
83	Pech et al. 1992	u	P	Australia	SEC	rem	open	high	intro	rabbit	intro	red fox, cat	no	2.37	160	25	0.97	.
84	Potvin et al. 1992a	u	P	N America	SEC	rem	open	high	native	beaver	native	wolf	no	2.08	275	26	0.62	x
85	Potvin et al. 1992b	u	both	N America	SEC	rem	open	high	native	deer	native	wolf	no	0.47	745	36	-0.21	x
86	Rautiainen 2005	u	R	Europe	SEC	rem	open	low	native	duck	intro	mink, raccoon dog	no	2.76	2.43	24	-0.84	x
87	Reid et al. 1995	u	both	N America	SEC	rem	excl	high	native	small rodent	native	carnivores, raptors	no	456.16	0.114	26	1.81	x
88	Rimmer and Deblinger 1992	u	R	N America	SEC	rem	excl	high	native	seabird	native	mesopredators	no	104.57	.	8	0.77	.
89	Risbey et al. 2000	u	P	Australia	SEC	rem	fence	high	both	small rodent	intro	red fox, cat	no	119.23	12	42	0.88	.
90	Robertson et al. 1994	u	both	S Pacific	BA	rem	open	high	native	passerine	intro	rat, cat	no	90.74	1.5	54	0.22	x
91	Sargeant et al. 1995	r	R	N America	SEC	rem	open	.	native	duck	native	weasels, mesopredators, ground squirrel	no	3.66	1.42	41	0.88	x
92	Sinclair et al. 2003	u	P	Africa	BA/ SEC	rem	open	high	native	ungulates	native	lion, hyena, jackals	no	0.32	3 150	96	1.55	x
93	Sovada et al. 1995	r	R	N America	SEC/ NE	(rem)	open	high	native	duck	native	coyote, red fox	no	12.06	0.6	2	-0.15	x
94	Spencer et al 2002	r	R	Australia	SEC	rem	open	high	native	turtle	intro	red fox	no	1.85	0.25	21	1.35	x
95	Spencer and Thompson 2005	u	both	Australia	SEC	rem	open	high	native	turtles	intro	red fox	no	1.23	0.245	21	0.03	x
96	Stout 1982	r	R	N America	SEC/ BA	rem	open	high	native	ungulate	native	coyote	no	0.17	123	36	0.93	x
97	Sullivan and Sullivan 1980	u	P	N America	SEC	add	open	.	native	small rodent	native	weasel	no	6.26	0.01	7	-0.33	x
98	Summers et al. 2004	u	R	Europe	SEC	rem	open	low	native	grouse	native	red fox, corvids	no	1.84	14	72	0.58	x
99	Sundell 2003	r	P	Europe	SEC	add	open	low	native	small rodents	native	least weasel	yes	3.59	7.68	37	0.16	x
100	Taitt and Krebs 1983	u	P	N America	SEC	rem	open	high	native	small rodent	native	heron	yes	61.33	0.0025	3	0.09	x
101	Taitt et al. 1981	u	both	N America	SEC	.	open	high	native	small rodent	native	heron, raptor, owls	yes	24.77	0.0025	2	1.33	x
102	Tapper et al. 1996	r	both	Europe	BA/ SEC	rem	open	high	native	grouse	native	weasels, fox, corvids, rat	no	2.98	5.3	36	0.98	x
103	Tocher 2006	r	P	N Zealand	BA	rem	open	high	native	lizards	intro	weasels, mesopredators, raptor, other mammals	no	46.22	0.0175	37	-0.06	x
104	Towns 1991	u	P	N Zealand	SEC	rem	open	high	native	lizards	intro	rat	no	1.23	0.13	120	3.08	x
105	van Aarde et al. 1996	u	both	Indian Ocean	BA	rem	open	high	intro	small rodent	intro	cat	no	185.71	290	168	0.18	.
106	Vibe-Petersen et al. 2003	r	P	Africa	SEC	both	excl	high	native	small rodent	native	owls, raptors, mesopredators	yes	62.49	0.005	30	0.03	x
107	Wilson et al. 1999	u	P	N America	SEC	rem	excl	high	native	small rodent	native	raptors, owls, weasel, fox, etc.	yes	23.00	0.09	25	0.55	x
108	Wolff et al. 1999	r	both	N America	SEC	add	excl	low	native	small rodent	native	raptors	no	6.61	0.002	2.5	-0.13	x
109	Ylönen et al. 1991	r	P	Europe	SEC	rem	excl	high	native	small rodent	native	owls, buzzard	yes	20.77	0.005	4	-0.43	x
110	Yunger 2004	r	P	N America	SEC	rem	excl	high	native	small rodents	native	coyote, fox, weasels, raptors, owls	no	68.86	0.006	9	-0.24	x
111	Zanette et al. 2006	r	R	N America	SEC/ NE	(rem)	open	high	native	passerine	both	cat, rat, raptor, passerine	no	35.91	1.5	30	0.14	.

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[\[Back to M080-018\]](#)