Levels of Interference with Trapping Operations

In the RBCT database, trapping opportunities were recorded as the numbers of traps deployed per location (usually a sett) that were set to catch. Successful trapping was indicated by the numbers of badgers caught and the numbers of lost opportunities were recorded as either the numbers of traps spoiled or the numbers of badgers released. The numbers of traps spoiled were only recorded for all locations in a particular trapping operation from June 2002. These data appear to include non-target species as a means of traps being spoiled.

Operational summaries of trapping operations were available for all proactive and most reactive operations. The majority of these summaries were tabulated daily such however some provided only the total number of traps deployed, nights trapped, badger caught, etc. All reports provided information on the number of lost trapping opportunities.

To describe the levels of interference with trapping operations, the operational summaries were used. A crude estimate of trapping opportunities for manuscript-based records was obtained by multiplying the number nights of trapping by the number of traps deployed which is probably an overestimate.

The overall level of lost trapping opportunities among all proactive operations was 9.3% (Range 1.7%-24.2%; Table 1). There was little evidence that this varied year-to-year, by month or by the numbers of potential trapping opportunities (Figure 1). Triplet F appeared to have a higher proportion of lost opportunities (which correlated with lowest amount of accessible land) and interference in triplets D and E seemed to vary widely between culls (Figure 1).

Among reactive operations, 5.7% (Range 0.0%-26.4%) of potential trapping opportunities were lost (Table 2). The proportion of trapping opportunities that were lost did not appear to vary by year, triplet or the number of potential trapping opportunities but appeared to be lower in the months of October, November and December (Figure 2).

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Table 1 – Summary of trapping effort and interference in all proactive culls†

Triplet	Accessible Land (km^2)	Operation	Year	Days of trapping	Potential trapping opportunities	Badgers culled	NTS trapped	Badgers released	Traps Interfered with	Proportion of opportunities lost	Missed badgers‡	Maximum trap saturation*
A	82.21	I	1999	8	2211	55	102	5	210	0.143	5	0.103
		F1	2002	11	3950	149	24	3	694	0.183	35	0.177
		M1	2003	9	1022	52	6	0	38	0.043	1	0.202
		M2	2004	8	2091	58	30	1	209	0.115	4	0.099
		F2	2005	8	1477	48	14	3	81	0.066	3	0.103
B	88.17	I	1998	11	7700	238	84	3	194	0.036		
		F1	1999	10	5840	85	33	3	340	0.064		
		M1	2000	41	3209	74	18	0	94	0.035		
		M2	2002	16	2153	49	11	1	217	0.106	8	0.122
		F2	2003	9	2950	172	11	9	157	0.060	12	0.165
		M3	2004	8	2428	111	11	6	166	0.075	12	0.137
		M4	2005	8	2526	58	13	6	108	0.050	5	0.071
C	98.25	I	1999	9	7560	246	40	6	363	0.054		
		F1	2000	9	4140	111	19	6	465	0.118		
		M1	2002	16	2640	126	12	4	141	0.059	9	0.233
		M2	2003	8	2441	132	14	2	219	0.096	18	0.116
		F2	2004	8	2266	187	20	6	199	0.099	24	0.255
		M3	2005	8	3064	162	15	12	250	0.090	24	0.186
D	75.87	I	2002	9	3380	293	40	3	15	0.017	9	0.332
		F1	2003	10	4010	368	49	3	238	0.072	25	0.340
		M1	2004	8	3331	211	20	0	529	0.165	52	0.235
		M2	2005	10	3120	179	51	6	395	0.145	30	0.175
E	77.94	I	2000	12	7818	602		10	795	0.103	41	0.337
		F1	2000	8	3430	142	2	3	81	0.025	2	0.156
		M1	2002	49	2210	96	12	3	142	0.071	9	0.333
		M2	2003	9	2069	258	19	3	366	0.188	61	0.418
		F2	2004	8	2514	213	8	0	379	0.154	38	0.318
		M3	2005	8	1732	148	3	3	159	0.095	17	0.286

Table 1 continued – Summary of trapping effort and interference in all proactive culls†

Triplet	Accessible Land (km^2)	Operation	Year	Days of trapping	Potential trapping opportunities	Badgers culled	NTS trapped	Badgers released	Traps Interfered with	Proportion of opportunities lost	Missed badgers‡	Maximum trap saturation*
F	55.85	I	2000	11	5643	451	31	16	1118	0.206		
		F1	2002	11	3438	248	51	16	439	0.147	48	0.241
		M1	2003	8	2233	103	3	5	375	0.172	24	0.139
		M2	2004	8	1757	220	6	18	402	0.242	90	0.458
		F2	2005	8	1582	155	33	13	247	0.185	40	0.293
G	74.03	I	2000	11	5428	425	1	25	144	0.031	14	0.408
		F1	2002	8	2525	204	13	10	193	0.086	18	0.257
		M1	2003	7	1952	144	29	5	245	0.143	17	0.271
		M2	2004	8	1955	103	9	5	257	0.139	21	0.152
		F2	2005	8	1764	117	35	9	208	0.143	24	0.259
H	77.49	I	2000	12	6816	162	332	2	121	0.067		
		F1	2002	9	4094	231	84	2	139	0.055	13	0.215
		M1	2003	8	1520	71	19	2	60	0.053	6	0.166
		M2	2004	9	2192	71	26	5	68	0.045	3	0.088
		F2	2005	8	1401	53	4	4	92	0.071	4	0.088
I	83.96	I	2002	9	3386	219	139	3	16	0.047	14	0.340
		F1	2003	8	2581	175	29	2	194	0.087	20	0.290
		M1	2004	8	2935	93	36	1	250	0.098	12	0.140
		M2	2005	8	1985	172	22	1	250	0.138	36	0.363
J	83.05	I	2002	11	4542	441	3	1	173	0.039	32	0.466
		F1	2003	9	2215	187	0	10	184	0.088	21	0.259
		M1	2004	8	2956	109	7	5	176	0.064	11	0.100
		M2	2005	8	2711	109	26	7	180	0.079	11	0.129
Total across all culls				539	160893	8886	1619	277	12775	0.091		
Total including culls with daily tabulated data only				416	109956	6862	960	226	9075	0.093	877	0.466

† Records for Initial culls in triplets A, B, C, E, F and H as well as first follow-up culls in triplets B and C and the first maintenance cull in triplet B were of manuscript form providing data only for operation-level estimates. All other culls had daily tabulated data, summarised across the trial area

‡ The number of missed badgers was calculated for each day by multiplying the number of lost trapping opportunities by the number of badgers caught per trap. This assumes that the additional available trap spaces would capture a badger at the same rate and therefore should be an overestimate

* Maximum trap saturation is the highest daily rate of badger capture per available trap space in the operation

Table 2 – Summary of trapping effort and interference in all reacttive culls except A1-3, B1-5 and C1-7.

Triplet	Operation	Year	Days of trapping	Potential trapping opportunities	Badgers culled	NTS trapped	Badgers released	Traps Interfered with	Proportion of opportunities lost	Missed badgers‡	Maximum trap saturation*
A	4	2000	4	16	1	0	0	0	0.000	0	0.250
	5	2002	8	499	24	9	1	1	0.022	0	0.136
	6	2002	8	112	2	0	0	0	0.000	0	0.071
	7	2002	8	144	4	1	0	0	0.007	0	0.118
	8	2002	8	262	17	8	0	0	0.031	0	0.147
	9	2003	8	268	24	1	0	0	0.004	0	0.300
	10	2003	8	299	12	10	0	0	0.033	0	0.171
B	6	2002	8	716	40	5	0	0	0.007	0	0.127
	7	2002	8	592	18	37	0	0	0.063	0	0.095
	8	2002	8	486	26	7	0	34	0.084	4	0.184
	9	2003	8	973	54	4	0	134	0.142	10	0.227
	10	2003	8	690	56	3	0	1	0.006	0	0.311
C	8	2002	8	92	6	1	0	0	0.011	0	0.250
	9	2002	8	201	3	0	0	0	0.000	0	0.074
	10	2002	8	67	6	0	0	0	0.000	0	0.333
	11	2002	7	28	0	0	0	0	0.000	0	0.000
	12	2002	8	55	5	0	0	0	0.000	0	0.286
	13	2002	8	60	6	0	0	0	0.000	0	0.375
	14	2002	8	80	2	2	0	0	0.025	0	0.100
	15	2002	8	783	87	1	5	94	0.128	18	0.453
	16	2003	8	132	8	1	0	31	0.242	1	0.308
	17	2003	8	474	26	0	3	122	0.264	7	0.154
	18	2003	8	116	14	0	0	8	0.069	3	0.500
	19	2003	8	143	22	0	0	30	0.210	2	0.750
	20	2003	8	364	31	7	0	27	0.093	3	0.380
D	1	2003	8	479	36	4	0	2	0.013	0	0.373
	2	2003	8	328	25	0	0	0	0.000	0	0.293
	3	2003	8	422	47	1	0	0	0.002	0	0.392
	4	2003	8	371	14	2	0	0	0.005	0	0.205

‡ The number of missed badgers was calculated for each day by multiplying the number of lost trapping opportunities by the number of badgers caught per trap. This assumes that the additional available trap spaces would capture a badger at the same rate and therefore should be an overestimate

* Maximum trap saturation is the highest daily rate of badger capture per available trap space in the operation

Table 2 continued – Summary of trapping effort and interference in all reactive culls

Triplet	Operation	Year	Days of trapping	Potential trapping opportunities	Badgers culled	NTS trapped	Badgers released	Traps Interfered with	Proportion of opportunities lost	Missed badgers‡	Maximum trap saturation*
E	1	2002	11	146	6	5	0	4	0.062	2	0.250
E	2	2002	11	669	44	5	0	6	0.016	0	0.239
E	3	2002	9	172	6	3	0	4	0.041	0	0.167
E	4	2002	8	171	6	5	0	0	0.029	0	0.150
E	6	2003	4	36	7	0	0	0	0.000	0	0.333
E	7	2003	8	96	10	0	0	0	0.000	0	0.500
E	8	2003	11	292	11	0	0	0	0.000	0	0.148
E	9	2003	8	548	54	2	0	0	0.004	0	0.403
E	10	2003	8	234	25	2	0	0	0.009	0	0.481
E	11	2003	4	104	19	0	1	0	0.010	1	0.560
F	1	2002	8	245	34	1	7	34	0.171	6	0.567
F	2	2002	8	235	28	0	0	36	0.153	2	0.800
F	3	2002	8	498	64	0	0	27	0.054	3	0.542
F	4	2002	8	56	13	0	0	0	0.000	0	0.750
F	5	2002	8	92	6	0	0	0	0.000	0	0.167
F	6	2003	8	520	52	3	0	0	0.006	0	0.408
F	7	2003	8	566	55	2	4	135	0.249	21	0.414
F	8	2003	8	622	68	2	2	0	0.006	0	0.430
F	9	2003	8	345	33	1	0	11	0.035	1	0.295
F	10	2003	8	788	82	0	1	28	0.037	1	0.303
G	1.2	2002	8	890	66	0	1	76	0.087	14	0.381
G	3	2002	8	453	59	5	0	4	0.020	1	0.436
G	4	2002	8	300	24	3	0	2	0.017	0	0.325
G	5	2002	8	229	23	2	0	0	0.009	0	0.300
G	6	2003	8	333	22	3	0	0	0.009	0	0.326
G	7	2003	8	344	62	1	0	0	0.003	0	0.674
H	1	2001	8	255	4	27	0	0	0.106	0	0.042
H	2	2001	9	268	12	6	1	38	0.168	2	0.130
H	3	2003	8	630	73	10	0	4	0.022	1	0.556
H	4	2003	8	745	70	32	1	31	0.086	5	0.277
I	1	2003	8	229	5	6	2	14	0.096	0	0.065
I	2	2003	9	306	7	4	0	0	0.013	0	0.061
I	3	2003	8	440	82	0	0	5	0.011	0	0.732
	Total		495	21109	1748	234	29	943	0.057	108	0.800