Interspecific competition and demography of small mammals in linear habitats

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Model set for demographic parameters, recapture, survival, seniority and lambda probabilities for each species. Each table corresponds to one parameter for every species.

Table 1: Models constructed for *Calomys musculinus* recapture probabilities estimation (*p*) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	K	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(Time)p(T°)$	25	212.823	0	0.540	65.99
$\phi(Time)p(s)$	27	215.413	2.590	0.147	62.291
$\phi(Time)p(sex + T°s)$	26	215.466	2.643	0.143	65.523
$\phi(Time)p(rain)$	25	217.302	4.479	0.057	70.478
$\phi(Time)p(sex + s)$	282	218.292	5.468	0.035	61.927
$\phi(Time)p(sex * T°)$	7	218.536	5.713	0.031	65.413
$\phi(Time)p(abundancecm)$	25	219.547	6.724	0.019	72.723
$\phi(Time)p(sex + rain)$	26	220.420	7.596	0.012	70.477
$\phi(Time)p(sex + abundanceCm)$	26	221.407	8.583	0.007	71.464
$\phi(Time)p(.)$	24	222.868	10.044	0.004	79.104
$\phi(Time)p(sex * rain)$	27	223.594	10.770	2.46^{-3}	70.471
$\phi(Time)p(sex * abundanceCm)$	27	223.826	11.002	2.19^{-3}	70.703
$\phi(Time)p(sex * s)$	31	223.996	11.172	9.57^{-4}	57.513
$\phi(Time)p(abundanceAa)$	25	225.482	12.659	8.99^{-4}	78.658
$\phi(Time)p(sex)$	25	225.605	12.781	2.19^{-4}	78.781
$\phi(Time)p(sex + abundanceAa)$	26	228.426	15.602	2.01^{-4}	78.483
$\phi(Time)p(sex * abundanceAa)$	27	231.457	18.633	4.82^{-5}	78.335
$\phi(Time)p(month)$	34	233.935	22.112	1.39^{-5}	56.700
$\phi(Time)p(sex + month)$	35	235.794	22.970	5.52^{-5}	54.825
$\phi(Time)p(sex * month)$	45	266.553	53.729	1.15^{-5}	43.404
$\phi(Time)p(Time)$	46	282.310	69.486	0	54.391
$\phi(Time)p(sex + Time)$	47	283.983	71.159	0	51.178
$\phi(Time)p(sex * Time)$	69	423.115	210.291	0	43.311

Table 2: Models constructed for *Calomys musculinus* survival probabilities estimation (Φ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	*K*	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(T°)p(T°)$	4	179.521	0	86.741	86.761
$\phi(sex + T°)p(T°)$	5	181.664	2.143	0.129	86.741
$\phi(s)p(T°)$	6	182.174	2.653	0.100	85.054
$\phi(abundanceAa)p(T°)$	4	182.974	3.452	0.067	90.213
$\phi(rain1)p(T°)$	4	183.068	3.547	0.064	90.308
$\phi(rain)p(T°)$	4	183.256	3.735	0.058	90.496
$\phi(sex * T°)p(T°)$	6	183.725	4.204	0.046	86.605
$\phi(sex + s)p(T°)$	7	184.369	4.848	0.033	85.016
$\phi(sex + abundanceAa1)p(T°)$	5	185.017	5.496	0.024	90.094
$\phi(sex + rain1)p(T°)$	5	185.224	5.703	0.022	90.301
$\phi(.)p(T°)$	3	185.284	5.763	0.021	94.652
$\phi(sex * abundanceAa1)p(T°)$	6	186.583	7.061	0.011	89.462
$\phi(sex + s)p(T°)$	10	187.089	7.568	0.009	80.813
$\phi(abundanceCm1)p(T°)$	4	187.167	7.646	0.008	94.406
$\phi(sex * rain1)p(T°)$	6	187.269	7.748	0.008	90.148
$\phi(f)p(T°)$	4	187.291	7.770	7.74^{-3}	94.531
$\phi(sex)p(T°)$	4	187.367	7.846	7.455^{-3}	94.606
$\phi(sex + abundanceCm1)p(T°)$	5	189.259	9.738	2.89^{-3}	94.336
$\phi(sex + f)p(T°)$	5	189.398	9.876	2.70^{-3}	94.475
$\phi(sex * abundanceCm1)p(T°)$	6	191.399	11.878	9.93^{-4}	94.279
$\phi(sex * f)p(T°)$	6	191.595	12.073	9.00^{-4}	94.475
$\phi(month)p(T°)$	13	195.729	16.207	1.14^{-4}	82.175
$\phi(sex + month)p(T°)$	14	198.191	18.667	3.32^{-5}	82.127
$\phi(Time)p(T°)$	25	212.824	33.302	2.21^{-8}	66.000
$\phi(sex * month)p(T°)$	24	213.167	33.646	1.86^{-8}	69.403
$\phi(sex + Time)p(T°)$	26	215.807	36.286	4.97^{-9}	65.864
$\phi(sex * Time)p(T°)$	48	285.861	106.340	0	48.052

Table 3: Models constructed for *Calomys musculinus* seniority probabilities estimation (γ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	*K*	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(T°)p(T°)\gamma(Time)$	27	837.413	0.000	0.835	73.712
$\phi(T°)p(T°)\gamma(month)$	15	840.812	3.399	0.153	111.208
$\phi(T°)p(T°)\gamma(s)$	8	846.444	9.031	0.009	133.731
$\phi(T°)p(T°)\gamma(abundanceCm)$	6	849.040	11.627	0.002	140.814
$\phi(T°)p(T°)\gamma(f)$	6	852.105	14.692	5.38^{-4}	143.879
$\phi(T°)p(T°)\gamma(.)$	5	854.061	16.648	2.03^{-4}	148.026
$\phi(T°)p(T°)\gamma(T°)$	6	854.221	16.807	1.87^{-4}	145.994
$\phi(T°)p(T°)\gamma(abundanceAa1)$	6	854.679	17.266	1.48^{-4}	146.453
$\phi(T°)p(T°)\gamma(abundanceCm1)$	6	855.332	17.919	1.07^{-4}	147.106
$\phi(T°)p(T°)\gamma(abundanceAa)$	6	856.228	18.815	6.85^{-5}	148.002
$\phi(T°)p(T°)\gamma(rain)$	6	856.252	18.839	6.77^{-5}	148.026

Table 4: Models constructed for *Calomys musculinus* lambda probabilities estimation (λ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	*K*	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(T°)p(T°)\lambda(Time)$	27	833.190	0.000	0.957	69.489
$\phi(T°)p(T°)\lambda(s)$	8	840.133	6.943	0.030	127.420
$\phi(T°)p(T°)\lambda(month)$	15	842.008	8.818	0.012	112.404
$\phi(T°)p(T°)\lambda(abundanceCm)$	6	847.426	14.236	0.001	139.200
$\phi(T°)p(T°)\lambda(f)$	6	850.058	16.867	2.08^{-4}	141.831
$\phi(T°)p(T°)\lambda(abundanceAa1)$	6	851.453	18.263	1.04^{-4}	143.227
$\phi(T°)p(T°)\lambda(.)$	5	852.281	19.091	6.85^{-5}	146.246
$\phi(T°)p(T°)\lambda(abundanceCm1)$	6	853.561	20.371	3.61^{-5}	145.335
$\phi(T°)p(T°)\lambda(rain)$	6	853.932	20.742	3.00^{-5}	145.706
$\phi(T°)p(T°)\lambda(abundanceAa)$	6	854.218	21.028	2.60^{-5}	145.992
$\phi(T°)p(T°)\lambda(T°)$	6	854.350	21.160	2.43^{-5}	146.124

Table 5: Models constructed for *Calomys venustus* recapture probabilities estimation (*p*) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	K	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(Time)p(sex)$	25	153.998	0	0.412	48.957
$\phi(Time)p(sex + abundanceCv)$	26	156.330	2.332	0.128	47.160
$\phi(Time)p(sex + abundanceAa)$	26	157.021	3.023	0.091	47.851
$\phi(Time)p(sex * abundanceCv)$	27	157.137	3.140	0.0858	43.695
$\phi(Time)p(sex + T°)$	26	157.273	3.275	0.080	48.103
$\phi(Time)p(sex + rain)$	26	158.100	4.102	0.053	48.929
$\phi(Time)p(abundanceCv)$	25	158.251	4.253	0.049	53.210
$\phi(Time)p(.)$	24	158.379	4.381	0.046	57.333
$\phi(Time)p(sex * abundanceAa)$	27	161.157	7.159	0.011	47.714
$\phi(Time)p(abundanceAa)$	25	161.362	7.364	0.010	56.321
$\phi(Time)p(sex * T°)$	27	161.546	7.548	9.46^{-3}	48.103
$\phi(Time)p(T°)$	25	162.189	8.191	6.86^{-3}	57.149
$\phi(Time)p(sex * rain)$	27	162.312	8.315	6.45^{-3}	48.870
$\phi(Time)p(rain)$	25	162.348	8.350	6.34^{-3}	57.307
$\phi(Time)p(sex + s)$	28	164.141	10.144	2.59^{-3}	46.276
$\phi(Time)p(s)$	27	168.876	14.878	2.42^{-4}	55.433
$\phi(Time)p(sex * s)$	31	177.689	23.692	2.95^{-6}	45.575
$\phi(Time)p(sex + month)$	35	197.803	43.805	1.26^{-10}	44.029
$\phi(Time)p(month)$	34	200.791	46.794	2.84^{-11}	52.751
$\phi(Time)p(sex * month)$	45	260.803	106.805	0	33.929
$\phi(Time)p(Time)$	46	283.578	129.580	0	47.332
$\phi(Time)p(sex + Time)$	47	287.627	133.629	0	41.516
$\phi(Time)p(sex * Time)$	69	794.887	640.889	0	19.763

Table 6: Models constructed for *Calomys venustus* survival probabilities estimation (Φ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	*K*	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(f)p(sex)$	4	114.645	0.000	0.150	72.777
$\phi(sex + f)p(sex)$	5	115.251	0.606	0.111	71.127
$\phi(sex + T°)p(sex)$	**5**	115.565	0.920	0.095	71.441
$\phi(.)p(sex)$	**3**	115.897	1.252	0.080	76.231
$\phi(sex)p(sex)$	4	116.127	1.483	0.071	74.260
$\phi(sex + abundanceCv1)p(sex)$	5	116.274	1.629	0.066	72.150
$\phi(T°)p(sex)$	4	116.332	1.688	0.064	74.465
$\phi(abundanceCv1)p(sex)$	4	116.444	1.799	0.061	74.576
$\phi(sex * f)p(sex)$	6	117.196	2.551	0.042	70.759
$\phi(rain1)p(sex)$	4	117.510	2.866	0.036	75.643
$\phi(abundanceAa1)p(sex)$	4	117.549	2.904	0.035	75.681
$\phi(rain)p(sex)$	4	117.679	3.034	0.033	75.811
$\phi(sex + rain1)p(sex)$	5	117.716	3.071	0.032	73.592
$\phi(sex * T°)p(T°)$	6	117.717	3.072	0.032	71.280
$\phi(sex + abundanceAa1)p(sex)$	5	117.791	3.147	0.031	73.668
$\phi(sex * abundanceCv1)p(sex)$	6	118.537	3.893	0.021	72.100
$\phi(sex * abundanceAa1)p(sex)$	6	119.889	5.244	0.011	73.452
$\phi(sex * rain1)p(sex)$	6	120.010	5.366	0.010	73.573
$\phi(sex + s)p(sex)$	7	120.411	5.766	8.39^{-3}	71.601
$\phi(s)p(sex)$	6	120.451	5.807	8.22^{-3}	74.014
$\phi(sex * s)p(sex)$	10	126.228	11.584	4.58^{-4}	69.921
$\phi(sex + month)p(sex)$	14	127.973	13.328	1.91-4	60.684
$\phi(month)p(T°)$	13	128.602	13.958	1.39-4	64.173
$\phi(sex + Time)p(T°)$	26	147.450	32.805	0	38.280
$\phi(sex * month)p(T°)$	24	153.568	38.923	0	52.522
$\phi(Time)p(T°)$	25	153.998	39.353	0	48.957
$\phi(sex * Time)p(T°)$	48	292.793	178.148	0	36.284

Table 7: Models constructed for *Calomys venusuts* seniority probabilities estimation (γ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	K	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(.)p(sex)\lambda(s)$	7	566.043	0	0.896	124.759
$\phi(.)p(sex)\gamma(T°)$	5	571.018	4.974	0.074	134.393
$\phi(.)p(sex)\gamma(rain1)$	5	573.760	7.717	0.019	137.135
$\phi(.)p(sex)\gamma(month)$	14	575.560	9.517	0.008	115.982
$\phi(.)p(sex)\gamma(abundanceCv1)$	5	578.047	12.003	0.002	141.422
$\phi(.)p(sex)\gamma(abundanceAa1)$	5	579.617	13.573	0.001	142.992
$\phi(.)p(sex)\gamma(.)$	4	589.667	21.624	1.80^{-5}	153.289
$\phi(.)p(sex)\gamma(abundanceCv)$	5	588.190	22.146	1.38^{-5}	151.564
$\phi(.)p(sex)\gamma(f)$	5	588.513	22.469	1.18^{-5}	151.888
$\phi(.)p(sex)\gamma(abundanceAa)$	5	589.153	23.109	8.59^{-6}	152.528
$\phi(.)p(sex)\gamma(Time)$	26	608.652	42.608	5.01^{-10}	108.105

Table 8: Models constructed for *Calomys venustus* lambda probabilities estimation (λ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	K	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(.)p(sex)\lambda(s)$	7	566.043	0	0.864	124.759
$\phi(.)p(sex)\lambda(T°)$	5	570.903	4.859	0.076	134.278
$\phi(.)p(sex)\lambda(month)$	14	572.590	6.547	0.033	113.013
$\phi(.)p(sex)\lambda(abundanceCv1)$	5	574.093	8.049	0.015	137.468
$\phi(.)p(sex)\lambda(rain)$	5	575.858	9.814	6.38^{-3}	139.233
$\phi(.)p(sex)\lambda(abundanceAa1)$	5	576.244	10.201	5.26^{-3}	139.619
$\phi(.)p(sex)\lambda(.)$	4	587.667	21.624	1.74^{-5}	153.289
$\phi(.)p(sex)\lambda(abundanceCv1)$	5	588.080	22.0367	1.41^{-5}	151.455
$\phi(.)p(sex)\lambda(f)$	5	588.513	22.469	1.14^{-5}	151.889
$\phi(T°)p(T°)\lambda(abundanceAa)$	5	588.973	22.929	9.07^{-6}	152.347
$\phi(.)p(sex)\lambda(Time)$	26	596.452	30.408	2.15^{-7}	95.905

Table 9: Models constructed for *Mus musculus* recapture probabilities estimation (p) K: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	K	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(Time)p(sex)$	25	535.218	0.000	0.232	228.275
$\phi(Time)p(sex + T°)$	26	536.503	1.285	0.122	227.232
$\phi(Time)p(sex + rain)$	26	536.662	1.444	0.112	227.392
$\phi(Time)p(sex + abundanceAa)$	26	537.188	1.969	0.087	227.917
$\phi(Time)p(sex * abundanceAa)$	27	537.191	1.973	0.087	225.579
$\phi(Time)p(.)$	24	537.386	2.167	0.078	232.755
$\phi(Time)p(sex * T°)$	27	537.640	2.421	0.069	226.028
$\phi(Time)p(sex * rain)$	27	537.732	2.513	0.066	226.120
$\phi(Time)p(rain)$	25	538.884	3.666	0.037	231.940
$\phi(Time)p(abundanceAa)$	25	538.919	3.700	0.036	231.975
$\phi(Time)p(T°)$	25	538.923	3.704	0.036	231.979
$\phi(Time)p(sex * s)$	31	541.523	6.305	0.010	220.402
$\phi(Time)p(sex + s)$	28	541.607	6.388	0.009	227.639
$\phi(Time)p(sex + month)$	35	542.073	6.854	0.007	211.206
$\phi(Time)p(month)$	34	543.391	8.172	0.004	214.983
$\phi(Time)p(s)$	27	543.580	8.361	0.003	231.968
$\phi(Time)p(sex * month)$	45	548.907	13.688	2.48^{-4}	129.579
$\phi(Time)p(sex + Time)$	47	561.312	26.093	5.01^{-7}	199.694
$\phi(Time)p(Time)$	46	562.184	26.966	3.24^{-7}	203.219
$\phi(Time)p(sex * Time)$	69	584.044	48.824	5.80^{-12}	159.369

Table 10: Models constructed for *Mus musculus* survival probabilities estimation (Φ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	K	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(sex + Time)p(sex)$	26	531.701	0.000	0.710	222.430
$\phi(Time)p(sex)$	25	535.218	3.518	0.122	228.275
$\phi(month)p(sex)$	13	536.649	4.948	0.060	256.571
$\phi(sex + month)p(sex)$	14	537.303	5.603	0.043	255.059
$\phi(sex + abundanceMm1)p(sex)$	5	537.525	5.824	0.039	274.337
$\phi(sex + abundanceMm1)p(sex)$	6	539.547	7.847	0.014	274.291
$\phi(abundanceMm1)p(sex)$	4	540.317	8.617	0.010	279.187
$\phi(sex * month)p(sex)$	24	543.214	11.514	0.002	238.584
$\phi(sex * s)p(sex)$	10	545.684	13.983	0.001	272.032
$\phi(s)p(sex)$	6	553.489	21.788	1.32^{-5}	288.233
$\phi(sex + s)p(sex)$	7	554.363	22.662	8.51^{-6}	287.026
$\phi(sex + rain1)p(sex)$	5	554.859	23.159	6.64^{-7}	291.672
$\phi(sex * rain1)p(sex)$	6	556.589	24.888	2.79^{-7}	291.332
$\phi(rain1)p(sex)$	4	556.869	25.169	2.43^{-7}	295.739
$\phi(sex + abundanceAa1)p(sex)$	5	560.987	29.286	3.10^{-7}	297.799
$\phi(abundanceAa1)p(sex)$	4	561.733	30.033	2.14^{-7}	300.603
$\phi(sex)p(sex)$	4	562.179	30.479	1.71^{-7}	301.049
$\phi(sex + T°)p(sex)$	5	562.523	30.822	1.44^{-7}	299.355
$\phi(sex * abundanceAa1)p(sex)$	6	562.690	30.989	1.32^{-7}	297.433
$\phi(sex + f)p(sex)$	5	562.792	31.092	1.26^{-7}	299.605
$\phi(.)p(sex)$	3	563.363	31.662	9.46^{-8}	304.279
$\phi(T°)p(sex)$	4	563.460	31.759	9.00^{-8}	302.330
$\phi(f)p(sex)$	4	564.140	32.440	6.41^{-8}	303.010
$\phi(sex * T°)p(sex)$	6	564.491	32.790	5.38^{-8}	299.234
$\phi(sex * f)p(sex)$	6	564.861	33.161	4.47^{-8}	299.605
$\phi(rain)p(sex)$	4	565.350	33.649	3.50^{-8}	304.220
$\phi(sex + Time)p(sex)$	48	568.614	36.913	6.85^{-9}	204.325

Table 11: Models constructed for *Mus musculus* seniority probabilities estimation (γ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	*K*	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(sex + Time)p(sex)\lambda(f)$	28	2272.310	0.00	0.344	315.198
$\phi(sex + Time)p(sex)\gamma(rain1)$	27	2273.045	0.739	0.238	315.938
$\phi(sex + Time)p(sex)\gamma(.)$	27	2274.113	1.803	0.139	319.351
$\phi(sex + Time)p(sex)\gamma(abundanceAa)$	28	2274.781	2.561	0.096	317.759
$\phi(sex$	28	2276.125	3.815	0.051	319.014
$\phi(sex$	28	2276.393	4.083	0.045	319.281
$\phi(sex$	28	2276.406	4.096	0.044	319.294
$\phi(sex + Time)p(sex)\gamma(T°)$	28	2276.453	4.145	0.043	319.342
$\phi(sex + Time)p(sex)\gamma(month)$	37	2287.897	17.587	5.21^{-5}	310.984
$\phi(sex + Time)p(sex)\gamma(Time)$	49	2294.007	21.697	6.68^{-6}	284.067
$\phi(sex + Time)p(sex)\gamma(s)$	30	2297.710	25.400	1.05^{-6}	335.856

Table 12: Models constructed for *Mus musculus* lambda probabilities estimation (λ) *K*: number of parameters. T°: temperature, t: time, *f*: fire, r: rain, s: season.

Best Models	*K*	AIC_C	ΔAIC_C	$AIC_C weights$	Deviance
$\phi(sex + Time)p(sex)\lambda(Time)$	49	2285.603	0	0.999	275.664
$\phi(sex + Time)p(sex)\lambda(month)$	37	2316.205	30.600	2.265^{-7}	337.291
$\phi(sex$	28	2337.001	51.403	6.885^{-12}	379.896
$\phi(sex + Time)p(sex)\lambda(s)$	30	2355.036	69.432	0	393.182
$\phi(sex$	28	2367.172	81.588	0	410.061
$\phi(sex + Time)p(sex)\lambda(abundanceAa)$	28	2379.875	94.272	0	422.764
$\phi(sex$	28	2388.336	102.732	0	431.224
$\phi(sex + Time)p(sex)\lambda(.)$	27	2391.579	105.984	0	436.826
$\phi(sex + Time)p(sex)\lambda(rain1)$	28	2392.023	106.419	0	434.912
$\phi(sex + Time)p(sex)\lambda(f)$	28	2392.782	107.178	0	435.670
$\phi(sex + Time)p(sex)\lambda(T°)$	28	2393.547	107.943	0	436.436