

Supporting Information

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Table S1. Standardized selection differentials from the yearly selection analysis using survival as a fitness estimate

Year	Females					Males				
	df	Estimate	SE	t	P	df	Estimate	SE	t	P
1969	74	0.062	0.082	0.756	0.452	121	-0.005	0.052	-0.099	0.922
1970	68	0.002	0.035	0.063	0.950	111	0.024	0.044	0.558	0.578
1971	72	0.018	0.034	0.539	0.592	108	0.035	0.057	0.620	0.537
1972	71	0.020	0.050	0.399	0.691	98	0.051	0.057	0.893	0.374
1973	71	-0.006	0.035	-0.169	0.867	90	-0.035	0.045	-0.785	0.435
1974	73	0.120	0.067	1.792	0.077	93	-0.073	0.054	-1.365	0.176
1975	115	-0.035	0.035	-0.986	0.326	137	0.009	0.031	0.301	0.764
1976	170	-0.008	0.036	-0.213	0.831	186	0.020	0.034	0.583	0.561
1977	171	-0.054	0.046	-1.176	0.241	182	-0.027	0.045	-0.599	0.550
1978	161	0.004	0.058	0.076	0.939	161	0.010	0.043	0.223	0.824
1979	147	0.042	0.049	0.856	0.393	147	0.096	0.052	1.849	0.067
1980	139	-0.112	0.059	-1.904	0.059	129	-0.064	0.063	-1.016	0.311
1981	167	-0.019	0.061	-0.316	0.752	157	-0.133	0.049	-2.697	0.008
1982	150	-0.068	0.057	-1.187	0.237	140	-0.037	0.053	-0.693	0.490
1983	148	0.103	0.053	1.961	0.052	125	0.040	0.052	0.766	0.445
1984	137	0.082	0.064	1.287	0.200	113	-0.108	0.063	-1.712	0.090
1985	125	-0.162	0.084	-1.929	0.056	97	-0.011	0.066	-0.169	0.867
1986	271	-0.016	0.042	-0.371	0.711	240	0.021	0.030	0.698	0.486
1987	318	0.026	0.044	0.589	0.557	284	0.005	0.033	0.138	0.890
1988	415	-0.012	0.032	-0.359	0.720	362	-0.012	0.028	-0.427	0.670
1989	405	0.012	0.035	0.341	0.733	353	-0.087	0.034	-2.549	0.011
1990	436	0.015	0.035	0.444	0.657	373	0.038	0.035	1.081	0.281
1991	425	-0.002	0.030	-0.070	0.944	346	-0.052	0.033	-1.572	0.117
1992	428	-0.012	0.043	-0.285	0.776	343	-0.022	0.045	-0.483	0.629
1993	390	-0.048	0.038	-1.264	0.207	303	0.090	0.047	1.908	0.057
1994	374	-0.034	0.053	-0.631	0.528	263	-0.012	0.049	-0.249	0.803
1995	345	-0.011	0.052	-0.202	0.840	246	0.024	0.045	0.525	0.600
1996	333	-0.031	0.052	-0.592	0.554	236	-0.031	0.053	-0.592	0.554
1997	335	0.015	0.045	0.336	0.737	226	0.040	0.042	0.951	0.343
1998	334	0.058	0.053	1.095	0.274	221	0.037	0.050	0.734	0.464
1999	305	0.014	0.047	0.294	0.769	197	0.000	0.050	-0.010	0.992
2000	288	0.161	0.063	2.567	0.011	191	-0.050	0.059	-0.851	0.396
2001	256	-0.037	0.069	-0.540	0.590	175	-0.072	0.074	-0.968	0.334
2002	220	-0.025	0.066	-0.379	0.705	164	-0.127	0.077	-1.645	0.102
2003	197	0.008	0.052	0.154	0.878	139	-0.005	0.073	-0.063	0.950

Significant standardized selection differentials are in bold.

Table S2. Significance of the random effects in the animal model

Fitted effect	Restricted dataset					Whole dataset				
	Full model	– Maternal	dL	χ^2	<i>P</i>	Full model	–PE	dL	χ^2	<i>P</i>
Females	–5169.16	–5169.16	0	0	1	–7147.65	–7148.24	0.59	1.18	0.28
Males	–4883.49	–4883.49	0	0	1	–6948.83	–6949.15	0.32	0.64	0.42

We started from a complete model dropping random effects sequentially. Resulting models were compared with likelihood ratio tests (LRT) where twice the difference in the log-likelihood of models (dL) was compared to a χ^2 distribution with degrees of freedom equaling the difference in the number of parameters between the models [Pinheiro JC, Bates DM (2000) *Mixed-Effects Models in S and S-Plus*. (Springer, New York)]. Maternal effects were modeled using the mother identity as a random effect. Permanent environment effects were estimated by including individual identity (unlinked to pedigree) into model as an additional random effect. Because estimation of maternal effects reduced the sample size, we first estimated maternal effects, and if not significant, subsequent models used all data aiming at estimating the size of variance components due to additive genetic and permanent environment effects. Permanent environment effects were retained in the models even if they were not significant to account for the repeated observations per individual and, hence, nonindependence of the data.