Supporting Information

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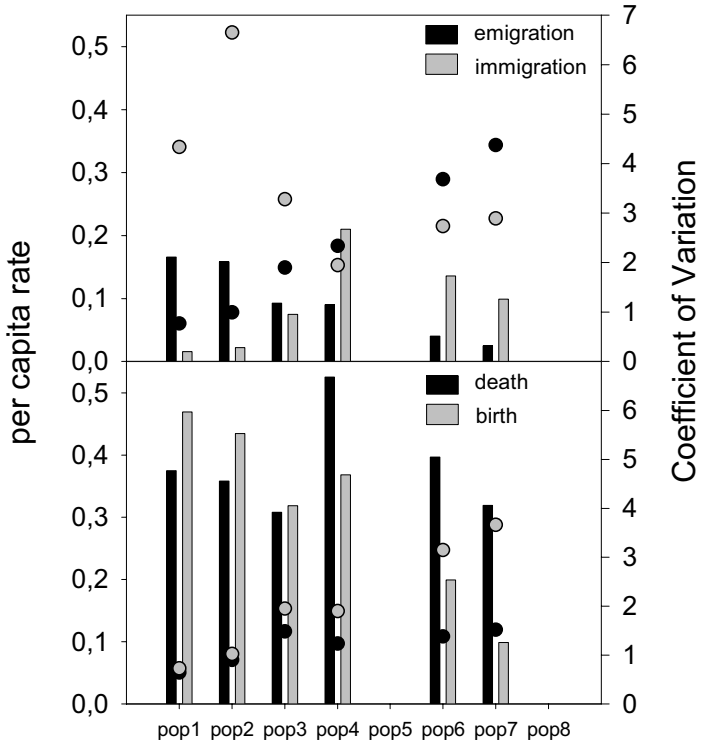

Fig. S1. Yearly per capita emigration, immigration, death, and birth rates for each of the local populations (bars) and their corresponding coefficients of variation (dots). The first three populations (pop1–pop3) are located inside a protected area and behave as sources; the rest are outside and behave as sinks (two potentially sink populations, pop5 and pop8, tend to be empty because they are far from the other populations and at the edge of the landscape).

Table S1. Analysis of sensitivity of metapopulation growth rate to movement and demographic parameters

Model parameter	Symbol	Range explored	Standardized parameter estimate	sr^2 (type II)	Ranking
Survival and reproduction					
Mortality of cubs inside N.P.	M_{cNP}	0.40–0.60	−0.435***	0.189	2
Increase in cub mortality outside N.P.	ΔM_c	0–0.10	−0.015***	<0.001	10
Mortality of subadults inside N.P.	M_{sNP}	0.15–0.35	−0.300***	0.088	4
Increase in subadults mortality outside N.P.	ΔM_s	0–0.20	−0.026***	<0.001	9
Mortality of dispersers inside N.P.	M_{dNP}	0.20–0.60	−0.152***	0.023	5
Increase in dispersers mortality outside N.P.	ΔM_d	0–0.40	−0.121***	0.015	7
Mortality of residents inside N. P.	M_{rNP}	0.05–0.25	−0.696***	0.481	1
Increase in residents mortality outside N.P.	ΔSM_r	0–0.40	−0.151***	0.023	6
Probability of reproduction	b_n	0.5–0.7	0.342***	0.117	3
Probability of reproduction in best areas	Δb_b	0–0.2	0.116***	0.013	8
Individual movement behavior					
Motion capacity					
Average number of steps per day	$f(\alpha)^\dagger$	16.5–21.7	0.017***	<0.001	1
Autocorrelation in dispersal habitat	θ_d	0.23–0.29	0.008*	<0.001	3
Bimodal distribution of turning angles	δ	0.59–0.72	[−0.004]	—	—
Long-distance threshold	L	5 ($p = 0.1$)–7 ($p = 0.1$)	[0.005]	—	—
Increase in autocorrelation in long-distance movements	$\Delta\theta_l$	0.24–0.30	[−0.005]	—	—
Navigation capacity					
Fragmentation threshold	N_d	4 ($p = 0.1$)–6 ($p = 0.1$)	[−0.004]	—	—
Increase in autocorrelation in fragmented areas	$\Delta\theta_f$	0.09–0.11	[−0.004]	—	—
Avoidance of open habitat	β	0.70–0.90	[0.007]	—	—
Probability to return to dispersal habitat	γ	0.08–0.10	−0.010**	<0.001	2

Standardized parameter estimates give information on the relative strength of the impact of each parameter on λ and can be compared between parameters, as given in the ranking of importance. *, $P < 0.05$; **, $P < 0.01$; ***, $P < 0.001$; sr^2, squared semipartial correlation; adj. r^2, for the full model 0.951. N.P., national park.

$^\dagger\alpha$ ranged between 0.00038 and 0.0002 (see *Model Parameterization* in *SI Appendix*)

Other Supporting Information Files

SI Appendix