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Supplementary material

Appendix 1

Is offspring dispersal related to male mating status? An experiment with the facultatively polygynous spotless starling

Juan G. Rubalcaba*, José P. Veiga and Vicente Polo

* Universidad Rey Juan Carlos, ESCET, Departamento de Biología, Geología, Física y Química Inorgánica, Área de Biodiversidad y Conservación, Móstoles, Madrid, Spain. E-mail: jg.rubalcaba@gmail.es.

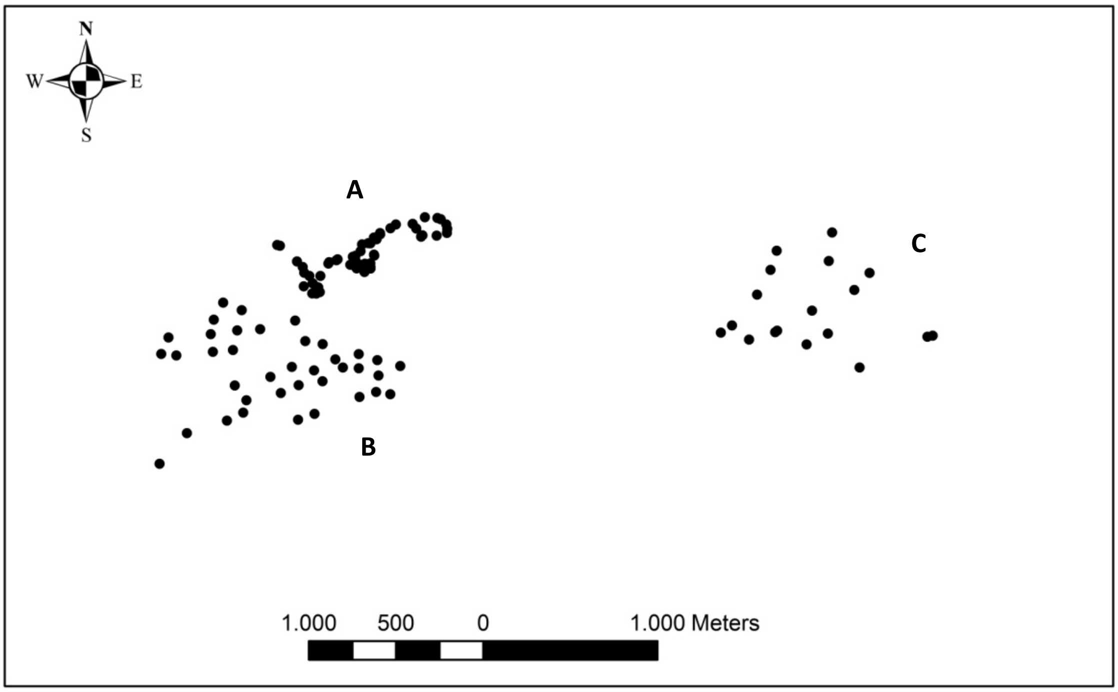

Fig A1. Spatial location of nest-boxes in the study area. All individuals used in this study (both the experimental and the observational) were born in the colony A. Recruits were recaptured in subsequent years in colonies A, B and C.

Table A1. Total number of nests and number of fledglings and recruits from experimental (EXP), control (CTR) and observational nests (Observ) each year of study, including both first and second clutches. The sex ratio of fledglings and recruits (i.e., proportion of males from total fledglings or recruits per year) is presented for each year and for the total sample (means ± SEs).

Year	Treatment	n nests	n fledglings	n recruits	Fledgling SR	Recruits SR
2002	**EXP**	48	126	5	0.45	0.00
	CTR	49	120	13	0.46	0.15
2004	**EXP**	36	73	10	0.53	0.60
	CTR	31	82	13	0.37	0.23
2005	**EXP**	38	105	7	0.55	0.29
	CTR	41	112	11	0.51	0.64
2006	**EXP**	43	110	5	0.50	0.20
	CTR	42	104	8	0.45	0.44
2003	**Observ**	45	119	8	0.52	0.13
2007		48	136	17	0.42	0.35
2008		43	113	7	0.46	0.29
2009		49	119	9	0.52	0.33
Total	**Observ**	185	487	41	0.46 ± 0.02	0.27 ± 0.06
	EXP	165	414	27	0.51 ± 0.02	0.27 ± 0.13
	CTR	163	418	45	0.45 ± 0.03	0.37 ± 0.11

Processing dispersal distances

The probability of detecting dispersal events differs throughout the spectrum of distances depending on the shape of the study area (e.g., Baker et al. 1995, Condor 97: 663-674). Generally as the dispersal distance of an individual becomes higher it is less likely for its breeding site to fall within the study area. Furthermore, the frequency of the observed dispersal distances within the study area may depend on the spatial distribution of the nest-boxes. Therefore, studies with nest boxes in limited plots may incur the risk that the frequency of long-distance dispersal events is underestimated, while the short and medium distances are overestimated (Baker et al. 1995 op cit.).

We estimated the detectability of each interval of distances between our nest boxes. Our aim was to correct the observed frequency of dispersers at a given distance by the probability of sampling this distance. Thus, the probability of detection was estimated as Nr / Br (i.e., Nr: number of dispersal events / Br: number of nest boxes at a distance r). Then, we randomized the distribution of distances and estimated the number of dispersal events expected at a distance r in the randomized plot. Thus, we compared the observed and corrected mean ± SEs of the experimental and control groups (Fig A2.). The method penalized the frequency of dispersers at the most sampled distances of the study area, and increased the frequency of dispersers in long- and intermediate distances. However, the difference between observed and corrected means was nearly the same in both EXP and CTR groups. This is reasonable because both experimental and control individuals were born and recruited in the same study area (i.e., with a constant distribution of nest-boxes) and therefore all dispersal distances had similar sampling errors. Results were similar using either corrected or observed data, with a significant interaction between greenery and sex in both observational and experimental studies (Table A2).

Table A2. Experimental data: Results of the General Linear Model of the observed and corrected dispersal distances in relation to treatment and sex. Distances were Box-Cox transformed to normalize the residuals of the mode.

	Observed		Corrected	
	$F_{1,69}$	P	$F_{1,69}$	P
Treatment	0.556	0.458	0.057	0.812
Sex	0.136	0.714	0.282	0.597
Treatment:Sex	10.069	0.002 (*)	16.596	<0.001 (*)

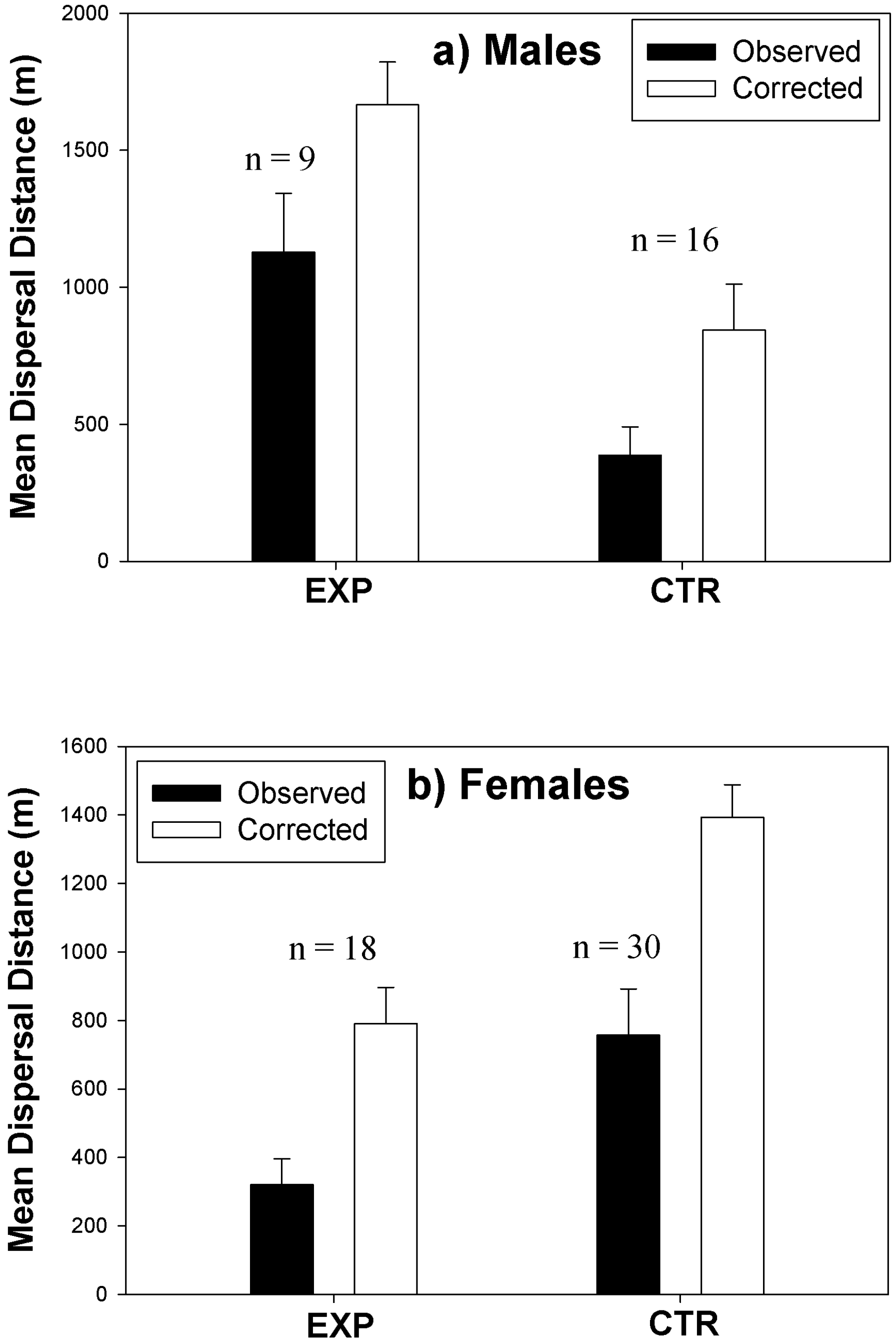

Fig A2. Experimental data: Observed and corrected dispersal distances (means ± SEs) of males (a) and females (b) from experimental and control nests.