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Supplementary Materials for

A shortage of males causes female reproductive failure in yellow ground squirrels

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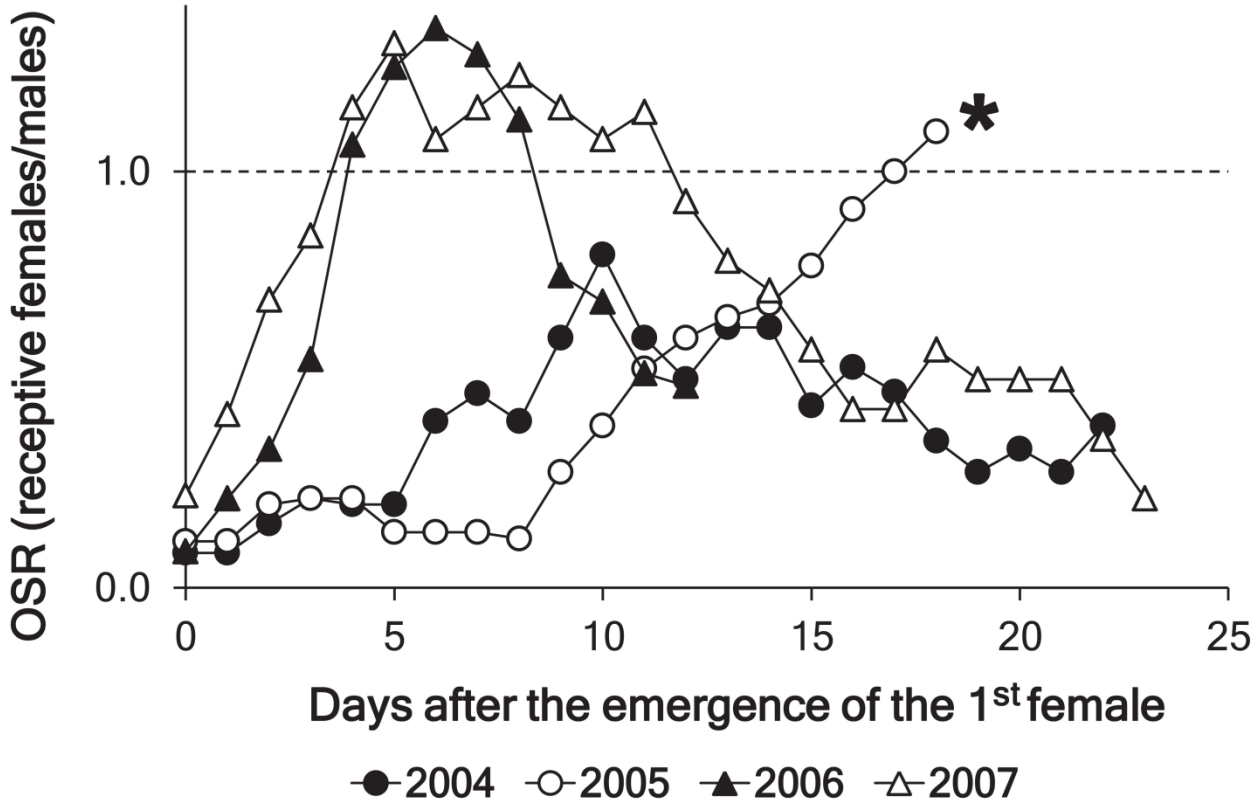

Fig. S1. Seasonal dynamics of OSR (daily ratio of receptive females to adult males).

Table S1. PCA of four variables describing the spatiotemporal distribution of females and males around receptive females.

Information	PC1	PC2
Eigenvalue	2.62	0.81
Percentage of total variance explained	65.4	20.3
Factor loadings (Varimax raw):		
Number of male burrows within 100 m	0.94	0.20
Average distance to 5 nearest male burrows	-0.92	-0.19
Number of female burrows within 70 m	0.54	0.66
Average distance to 5 nearest female burrows	-0.14	-0.94

Table S2. AICc values for GLMM explaining female breeding status in yellow ground squirrels, with study year as additional predictor. Predictors included local male (Males) and female (Females) densities, the OSR, study year (Year); female identity was fitted as a random effect in all models. N =98, k is the number of parameters estimated by the model, ΔAIC_c is the difference between the AIC_c score of a given model and the best model with the lowest AIC_c score*, and AIC_c weight reflects the relative support for each model. Only models with $\Delta AIC_c \leq 2.0$ are shown.

Model	k	ΔAIC_c	AIC_c weights
OSR+Year	6	0	0.51
OSR+Year+Females	7	1.8	0.21
OSR+Year+Males	7	2.0	0.19

* The lowest AIC_c score was 98.1.

Table S3. AIC_c values for generalized linear models explaining female breeding status in yellow ground squirrels. Predictors included local male (Males) and female densities, the OSR, female age (Age), female body mass (Mass) and date of female spring emergence. The sample did not contain repeated measurements for the same female, so no random factor was included in the models. N =50, k is the number of parameters estimated by the model, ΔAIC_c is the difference between the AIC_c score of a given model and the best model with the lowest AIC_c score*, and AIC_c weight reflects the relative support for each model. Only models with $\Delta AIC_c < 2.0$ are shown.

Model	k	ΔAIC_c	AIC_c weights
OSR+Males	2	0	0.18
Mass+OSR+Males	3	0.7	0.13
OSR+Males+Age	3	1.5	0.08

* The lowest AIC_c score was 58.2.