1 Electronic Supplementary Material for the manuscript "Urban blackbirds have shorter

2 telomeres" by J.D. Ibáñez-Álamo, J. Pineda-Pampliega, R.L. Thomson, J.I. Aguirre, A.

3 Díez-Fernández, B. Faivre, J. Figuerola and S. Verhulst. 2018. Biology Letters

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7 Figure S1. Geographical distribution of the study dyads: Granada (1), Seville (2),

8 Madrid (3), Dijon (4), Turku (5). For each dyad, samples were collected from an urban

9 and a forest area separated by an average of 29.8 ± 3.8 km, which is an order of

10 magnitude greater than the mean adult and natal dispersal distance of blackbirds [1].
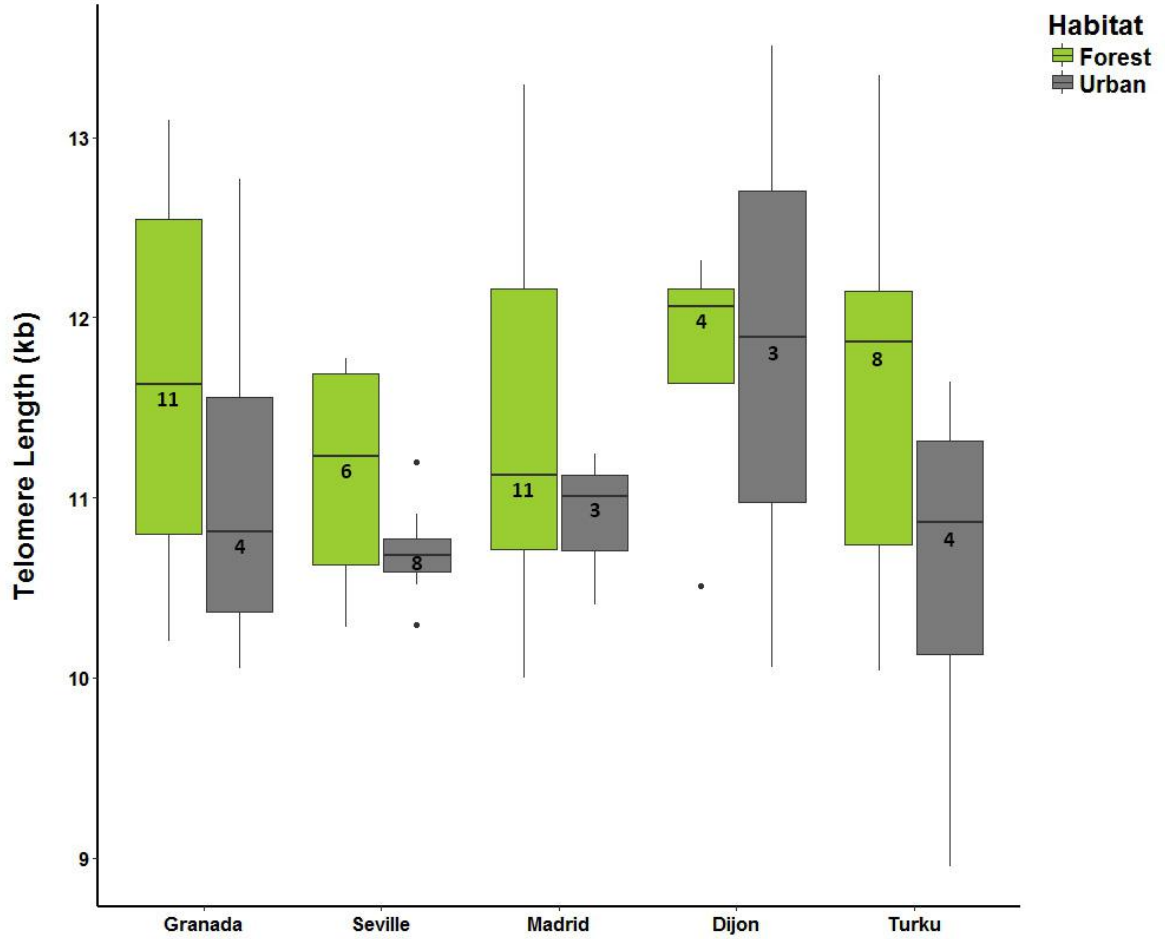
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17 Figure S2. Telomere length of yearling blackbirds in urban and forest habitats at each of

18 the five dyads. Box plots show the median, upper and lower quartiles, maximum and

19 minimum values, and outliers. Numbers within box plots represent sample sizes.
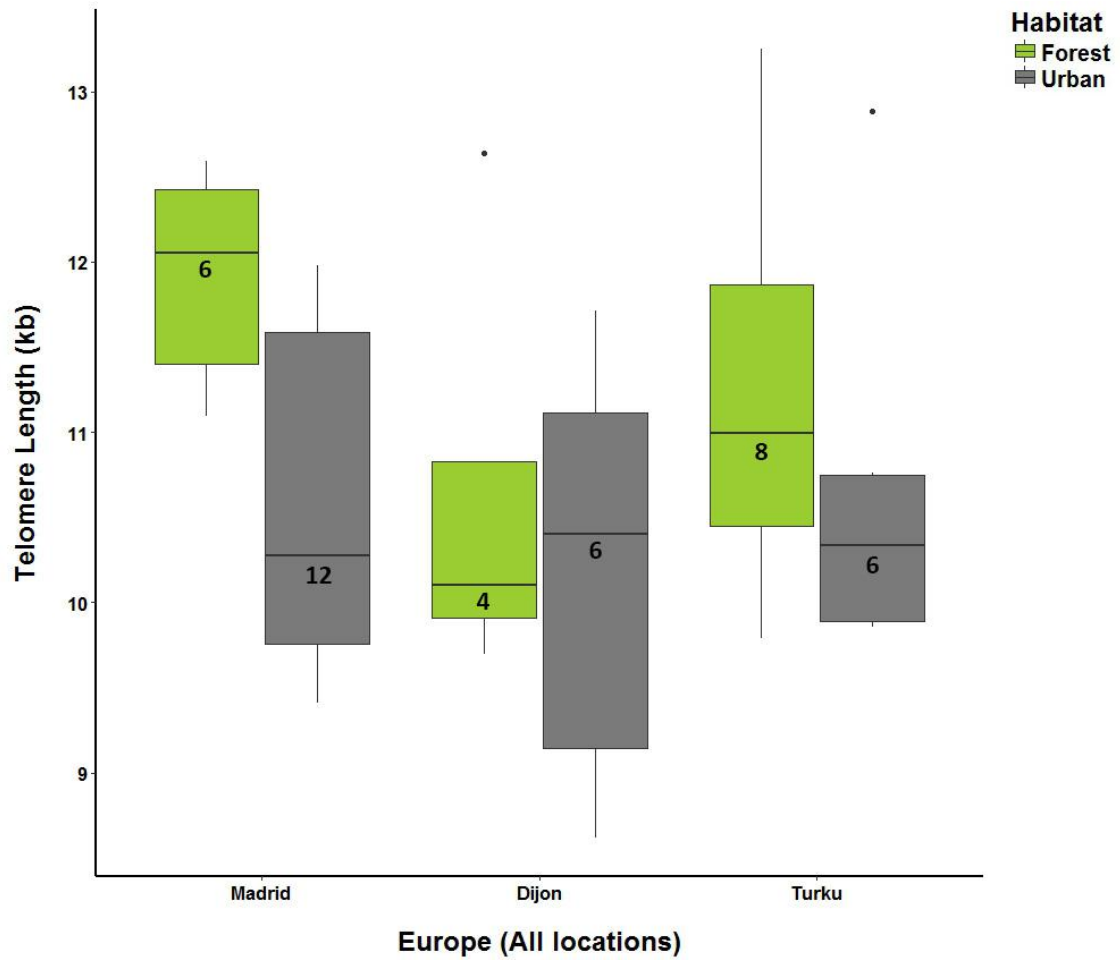
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27   Figure S3. Telomere length of old adult blackbirds (≥2 years old) for locations studied.

28   The box plots show the median, upper and lower quartiles, maximum and minimum

29   values. Numbers within box plots represent sample sizes.

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39 Table S1. Habitat characteristics of capture locations. Negative values of the PC1 (urbanization score) indicate urban locations while positive
40 values correspond with natural sites according to [2].

Dyad	Habitat	Coordinates	Sampling dates	Mean building density score	Cells with high building density	Cells with roads	Mean vegetation density score	Cells with high vegetation density	Urbanization score (PC1)
Granada	Urban	37° 10' 38.41" N 3° 35' 54.805" W	12 Mar – 27 Mar	1.45	50	96	1.05	13	-3.15
	Forest	37° 9' 4.471" N 3° 24' 22.133" W	06 Apr – 24 Apr	0.10	0	8	2.00	100	2.06
Seville	Urban	37° 23' 20.731" N 5° 59' 4.052" W	30 Mar – 15 May	0.85	12	93	1.25	29	-1.27
	Forest	37° 19' 39.868" N 6° 14' 38.594" W	17 Apr – 12 Jun	0.29	5	29	1.91	91	1.38
Madrid	Urban	40° 25' 0.39" N 3° 42' 13.644" W	27 Apr – 05 May	0.92	25	99	1.46	47	-1.30
	Forest	40° 45' 3.859" N 3° 48' 36.011" W	05 May – 17 May	0.07	0	0	2.00	100	2.16
Dijon	Urban	47° 19' 19.369" N 5° 2' 29.328" E	28 May – 04 Jun	1.19	21	99	1.04	7	-2.31
	Forest	47° 10' 9.185" N 5° 26' 10.529" E	25 May – 03 Jun	0.00	0	12	1.99	99	2.08
Turku	Urban	60° 27' 6.527" N 22° 15' 59.868" E	07 Jun – 15 Jun	1.06	11	99	1.12	15	-1.78
	Forest	60° 41' 8.585" N 22° 22' 18.523" E	16 Jun – 01 Jul	0.08	0	0	1.99	99	2.13

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44   Table S2. General Linear Mixed Model exploring habitat differences (urban vs forest)

45   in telomere length of yearling blackbirds. P-values smaller than 0.05 are shown in

46   italics.

	Estimate	SE	df	F	P
AVERAGE					
Intercept	11551	295			
Habitat (Urban)	*-547*	*224*	*1, 56.9*	*5.94*	*0.02*
Rejected terms					
Sex (Male)	-285	215	1, 57.0	1.75	0.19
Sex x Habitat	469	448	1, 56.0	1.09	0.30
Random factor			Variance		
Gel			268873		
Dyad			3260		
Location:Dyad			0		
Residuals			702739		

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51   Table S3. General Linear Mixed Model exploring habitat differences (urban vs forest)

52   in telomere length of old male blackbirds (≥2 years old). P-values smaller than 0.05 are

53   shown in italics.

	Estimate	SE	df	F	P
AVERAGE					
Intercept	11359	361			
Habitat (Urban)	*-922*	*332*	*1, 47.0*	*7.73*	*0.008*
Random factor			Variance		
Gel			136592		
Dyad			0		
Location:Dyad			0		
Residuals			1116365		

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57 Table S4. Generalized Linear Mixed Model exploring habitat differences (urban vs

58 forest) in blackbird's age ratio (individuals of ≥2 years old). P-values smaller than 0.05

59 are shown in italics. N = 263.

		Estimate	SE	Z	P
AGE RATIO					
	Intercept	0.2787	0.1771		
	Habitat (Urban)	*0.9548*	*0.2728*	*3.50*	*0.0005*
Rejected terms					
	Sex (Male)	0.1567	0.2724	0.58	0.57
	Sex x Habitat	0.4474	0.5506	0.81	0.42
Random factor		Variance			
	Dyad	1.222e-15			
	Location:Dyad	0			

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References

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2.   Liker A, Papp Z, Bókony V, Lendvai ÁZ. 2008 Lean birds in the city: Body size and condition of house sparrows along the urbanization gradient. *J. Anim. Ecol.* **77**, 789–795. (doi:10.1111/j.1365-2656.2008.01402.x)