Journal of Avian Biology

JAV-00795
Trigo, S. and Mota, P. G. 2015. Carotenoid-based plumage colouration is predicted by age and parasites in the male European serin. – J. Avian Biol. doi: 10.1111/jav.00795

Supplementary material

Appendix 1

Table A1 Descriptive statistics of morphological measurements and parasite load, for male serins. Values are Mean ± standard errors (SE), and CV is the coefficient of variation. N = 100.

	Mean ± SE	CV (%)
Wing length (mm)	70.55 ± 0.168	2.4
Tarsus length (mm)	15.18 ± 0.143	9.4
Body mass (g)	11.53 ± 0.092	7.9
Ectoparasite load	5.68 ± 0.513	89.8
Intestinal parasite load	2.05 ± 0.129	28.8

Table A2 Descriptive statistics of colouration measurements for male serins. Values are Mean ± standard errors (SE), and CV is the coefficient of variation. N = 100.

	Mean ± SE
Plumage double cone	0.191 ± 0.003
Plumage SWS ratio	0.53 ± 0.007
Brightness	15.67 ± 0.300
Hue	495.65 ± 2.758
Saturation	1.49 ± 0.013
Patch size (cm^2)	8.22 ± 0.131

Table A3 Generalized linear models for colour variables of plumage colouration with the predictors of each model. Values are estimate of the model (β), standard errors (SE), the Wald χ^2 and p-values for significance.

	β	SE	Wald χ^2	P
Hue				
Intercept	543.324	120.7668	20.24	< 0.0001
Days since moult	0.535	0.2007	7.11	**0.008**
Age	-4.947	5.8382	0.72	0.397
Ectoparasite load	-0.847	0.5641	2.25	0.133
Body size	-0.917	3.1739	0.08	0.773
Wing length	-1.727	1.6648	1.08	0.300
Intestinal parasite load	0.952	10.1596	0.01	0.92
Saturation				
Intercept	0.220	0.4192	0.28	0.600
Days since moult	0.006	0.0007	64.71	**< 0.0001**
Age	-0.061	0.0203	9.05	**0.003**
Ectoparasite load	0.009	0.0020	22.35	**< 0.0001**
Body size	-0.014	0.0110	1.66	0.197
Wing length	0.006	0.0058	0.96	0.326
Intestinal parasite load	0.060	0.0461	1.69	0.19
Brightness				
Intercept	14.807	11.4878	1.66	0.197
Days since moult	-0.039	0.0191	4.25	**0.039**
Age	0.459	0.5554	0.68	0.408
Ectoparasite load	-0.284	0.0537	28.02	**< 0.0001**

Body size	-0.102	0.3019	0.12	0.734
Wing length	0.116	0.1584	0.54	0.463
Intestinal parasite load	-0.397	0.5007	0.63	0.43

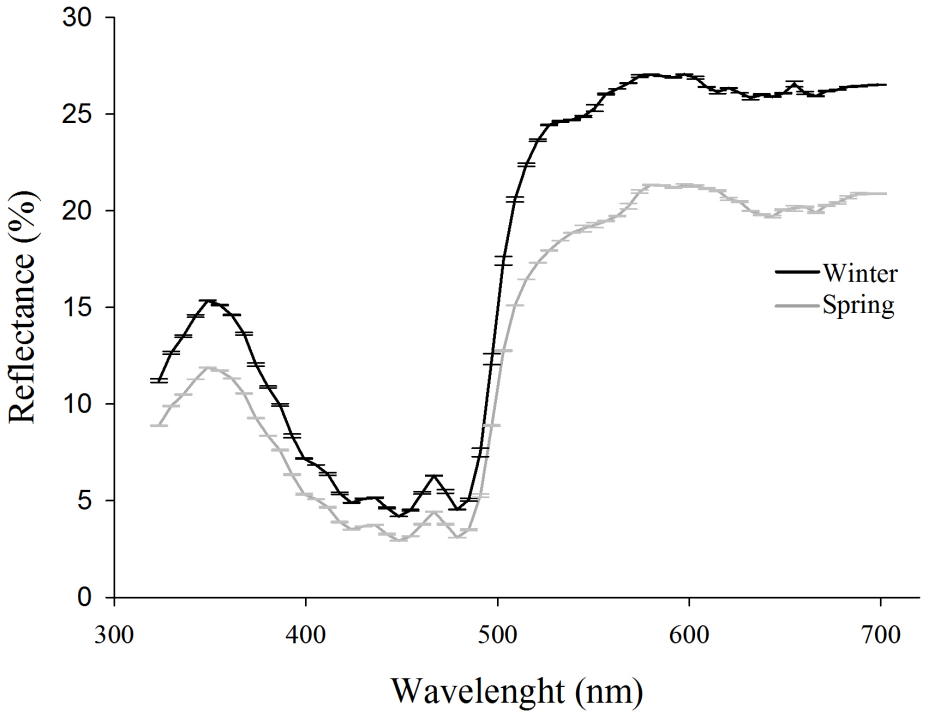

Figure A1 Average reflectance spectra of males during winter (black solid line) and spring (grey line). The data was divided into two periods of time (winter: from 133 to 160 days since moult, n= 76; spring: from 161 to 182 days since moult until, n=24) to allow for a better visualization of results.