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Appendix 1

Table A1. Details of the local weather station and values of the NAO index and temporal variation in winter and spring climatic variables during the study. Total rainfall and temperature during winter (January–February) and spring temperature (first half of April) in the weather station nearby to the study population. Details of the station; Name Iznalloz. Location: 37°25'03''N, 3°33'00''W. Altitude: 935 m. Regional and local winter climatic conditions did not experience any obvious linear trend over the nine years of study (linear regressions of NAO index, temperature and rainfall on year; NAO index: slope = –0.18 ± 0.34, t_7 = –0.53, p = 0.61; January temperature: slope = 0.11 ± 0.15, t_7 = 0.69, p = 0.51; February temperature: slope = –0.04 ± 0.24, t_7 = –0.19, p = 0.84; January rainfall: slope = 4.09 ± 3.55, t_7 = 1.14, p = 0.28; February rainfall: slope = 0.96 ± 5.13, t_7 = 0.18, p = 0.85; April temperature: slope = 0.05 ± 0.37, t_7 = 0.14, p = 0.89).

	Rainfall (mm)		Temperature (°C)			
Year	January	February	January	February	April	NAO index
2005	0.0	30.2	4.5	2.3	9.5	0.12
2006	32.6	50.2	2.7	4.6	12.8	–1.09
2007	18.6	20.4	6.3	7.4	5.8	2.79

2008	27.8	25.0	5.9	6.4	10.9	2.10
2009	31.2	39.8	3.4	5.2	8.7	–0.41
2010	98.8	134.8	4.5	5.7	9.2	–4.64
2011	16.2	28.4	4.7	6.1	15.1	–1.57
2012	24.8	5.8	4.9	2.2	8.4	3.17
2013	50.6	46.4	5.6	4.2	9.4	–1.97
Total mean ± SD	33.4 ± 28.1	42.3 ± 37.2	4.8 ± 1.2	4.9 ± 1.8	9.9 ± 2.7	-0.16 ± 2.5

Appendix 2

Table A2. Temporal autocorrelation in regional and local climatic conditions and laying date of magpies over the nine years of study and of the residuals of linear models of these variables on study year.

NAO index					January rainfall				
Lag	r	SE	Q statistic	p	Lag	r	SE	Q statistic	p
1	–0.003	0.28	0.00	0.99	1	–0.180	0.28	0.40	0.52
2	–0.471	0.27	3.14	0.20	2	–0.104	0.26	0.55	0.76
3	–0.162	0.24	3.57	0.31	3	0.073	0.24	0.64	0.88
4	0.154	0.22	4.05	0.39	4	0.073	0.24	0.64	0.88
January temperature					February rainfall				
Lag	r	SE	Q statistic	p	Lag	r	SE	Q statistic	p
1	–0.180	0.28	0.40	0.52	1	–0.091	0.28	0.10	0.74
2	–0.491	0.26	3.81	0.14	2	–0.434	0.26	2.77	0.25
3	0.144	0.24	4.16	0.24	3	–0.102	0.24	2.94	0.40
4	–0.000	0.22	4.16	0.38	4	0.152	0.22	3.40	0.49
February temperature					Laying date				
Lag	r	SE	Q statistic	p	Lag	r	SE	Q statistic	p
1	0.168	0.28	0.35	0.55	1	0.185	0.28	0.42	0.51
2	–0.297	0.26	1.60	0.45	2	–0.317	0.26	1.84	0.39
3	–0.070	0.24	1.68	0.64	3	–0.052	0.24	1.88	0.59
4	–0.100	0.22	1.88	0.75	4	–0.399	0.22	5.04	0.28

Residuals NAO index					Residuals January rainfall				
Lag	r	SE	Q statistic	p	Lag	r	SE	Q statistic	p
1	–0.020	0.28	0.00	0.94	1	–0.271	0.28	0.91	0.34
2	–0.592	0.27	4.96	0.08	2	–0.231	0.26	1.66	0.43
3	–0.207	0.25	5.67	0.13	3	–0.051	0.25	1.79	0.63
4	0.246	0.22	6.87	0.14	4	0.177	0.22	2.32	0.67
Residuals January temperature					Residuals February rainfall				
Lag	r	SE	Q statistic	p	Lag	r	SE	Q statistic	p
1	–0.227	0.28	0.64	0.42	1	–0.091	0.28	0.10	0.74
2	–0.450	0.26	3.50	0.17	2	–0.455	0.26	304	0.22
3	0.162	0.25	3.93	0.27	3	–0.122	0.24	3.28	0.35
4	–0.068	0.22	4.02	0.40	4	0.178	0.22	3.91	0.41
Residuals February temperature					Residuals Laying date				
Lag	r	SE	Q statistic	p	Lag	r	SE	Q statistic	p
1	0.144	0.28	0.26	0.61	1	0.216	0.28	0.58	0.44
2	–0.306	0.26	1.58	0.45	2	–0.311	0.26	1.95	0.37
3	–0.067	0.25	1.66	0.64	3	–0.085	0.24	207	0.55
4	–0.088	0.22	1.81	0.77	4	–0.400	0.22	5.24	0.26
April temperature					Residuals April temperature				
Lag	r	SE	Q statistic	p	Lag	r	SE	Q statistic	p
1	–0.483	0.28	2.89	0.08	1	–0.489	0.28	2.96	0.08
2	0.009	0.26	2.89	0.24	2	–0.016	0.26	2.96	0.22
3	0.107	0.25	3.08	0.38	3	0.119	0.25	3.20	0.36
4	–0.408	0.22	6.38	0.17	4	–0.401	0.22	6.38	0.17

Appendix 3

Figure A1. Number of magpie nests (white bars) in relation to laying date in the period 2005-2013. Number of parasitized nests is represented by black bars. n = 424 nests of which 165 were cuckoo parasitized. Number of magpie nests and cuckoo parasitized nests (in brackets) for each year are provided on top right of each panel. Median laying dates (in days from 1 of April) for parasitized magpie nests were 19.5, 19.0, 30.0, 30.0, 27.0, 25.0, 19.0, 21.0, and 29.0 from 2005 to 2013, respectively, and 19.0, 22.0, 21.5, 23.0, 26.0, 26.0,18.0, 18.0, and 20.0 from 2005 to 2013 for all magpie nests.