

Supplementary material

Appendix 1

Table A1. Seasonal time window of catching as day of year (1 Jan = 1) for each year.

Table A2. Normal linear model on day of capture of radio-tracked northern wheatears in autumn.

Figure A1. Phenology of migrating northern wheatears per sex, age, and subspecies on Helgoland in autumn and spring.

Figure A2. Date of capture of radio-tracked northern wheatears on Helgoland in autumn.

Table A1. Seasonal time window of catching as day of year (1 Jan = 1) for each year.

	1998	1999	2000	2001	2002	2008	2009	2010	2014	2015	2016	2017
autumn	220- 288	211 - 299	221 - 277	220 - 285	213 - 280	238 - 280	NA	223 - 242	NA	232 - 283	241 - 273	NA
spring	90 - 148	99 - 144	100 - 146	107 - 145	106 - 159	108 - 142	104 - 178	80 - 146	90 - 145	96 - 145	99 - 132	115

Table A2. Normal linear model on day of capture of radio-tracked northern wheatears in autumn. Birds were classified as 1st calendar year (CY) and old individuals. For sample sizes per age group and subspecies see Figure A2. Means and 95% credible intervals (Crl) are displayed for fixed factors. 95% Crl not including zero are given in bold. Reference category for age is “young”, i.e., 1st CY birds in autumn, for year 2015, and for subspecies *leucorhoa* northern wheatears, respectively.

Parameters	Estimate / 95% Crl
Intercept	272 / 269 – 276
Age [old]	-4.0 / -8.7 – 1.1
Year [2016]	-19.7 / -23.7 – -15.6
Subspecies [<i>oenanthe</i>]	-19.2 / -24.1 – -14.6
Age [old] * Year [2016]	5.1 / 13.7 – 21.8
Age [old] * Subspecies [<i>oenanthe</i>]	9.4 / -0.9 – 20.0
Year [2016] * Subspecies [<i>oenanthe</i>]	9.2 / 15.5 – 21.9
Age [old] * Year [2016] * Subspecies [<i>oenanthe</i>]	-18.6 / -33.7 – -3.1

Figure A1. Phenology of migrating northern wheatears per sex, age, and subspecies on Helgoland in autumn and spring. Temporal occurrence, as day of year (1 Jan = 1), are shown for the *leucorhoa* subspecies (blue) and the *oenanthe* subspecies (red) with lighter colours indicating 1st calendar year (CY) (autumn) or 2nd CY (spring) birds and darker colours indicating old birds, respectively. Sample size per group is given next to the corresponding boxes. Boxes present 5, 25, 50, 75 and 95% percentiles and outliers (dots). Be aware that sample size for autumn data set is lower than in Table 1 and Figure 1, because only some 1st CY birds were molecularly sexed. 1st CY northern wheatears cannot be sexes based on plumage characteristics.

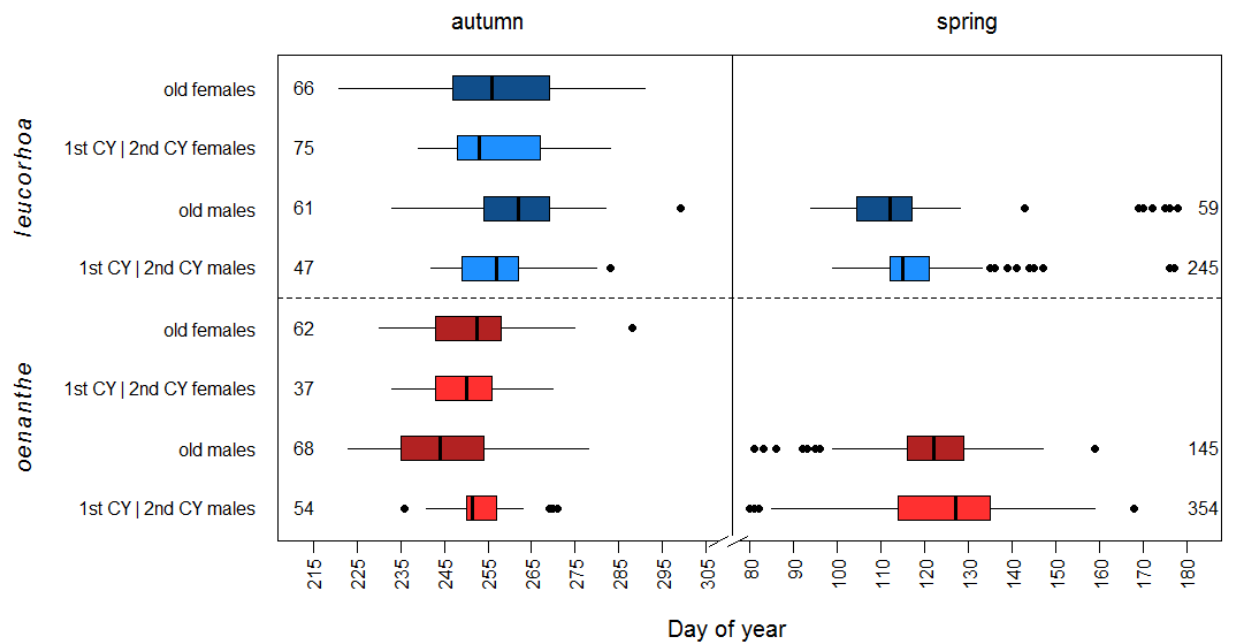


Figure A2. Date of capture of radio-tracked northern wheatears on Helgoland in autumn. Temporal occurrence of date of capture, as day of year (1 Jan = 1), are shown for the *leucorhoa* subspecies (blue) and the *oenanthe* subspecies (red) with lighter colours indicating 1st calendar year (CY) (autumn) or 2nd CY (spring) birds and darker colours indicating old birds for the year 2015 and 2016, respectively. Sample sizes of radio-tracked northern wheatears per group are given below the corresponding boxes. Boxes present 5, 25, 50, 75 and 95% percentiles and outliers (dots).

