1 **Supporting Information for Bötsch et al.**

2 **Table S1.** Bird species recorded during the breeding bird censuses in 2014 and 2015 (n = 34), with their scientific and English names, as well as the

3 abbreviations used for the figures (Electronic supplementary material figure S1 and S2). We also added the threshold dates after which a species

4 was considered as a breeding bird and not a migrant passing through (according to [37]), and the classification into *migration type* (long-distance

5 migrants versus others (residents and short-distance migrants)), *nesting guild* (cavity, ground and open-cup nesters), *foraging guild* (ground, above

6 ground) and *sensitivity* according to flight initiation distance (FID); FID > median FID = high sensitivity, FID ≤ median FID = low sensitivity.

Scientific name	Abreviation	English name	Threshold date	Typ[1]	Nesting guild[1]	Foraging guild[1]	Sensitivity[2]
Aegithalos caudatus	AEGCAU	Long-tailed Tit	15 April	Others	Open-cup	Above ground	Low
Anthus trivialis	ANTTRI	Tree Pipit	25 April	Long-distance migrant	-	-	-
Buteo buteo	BUTBUT	Common Buzzard	15 April	Others	Open-cup	Above ground	High
Certhia brachydactyla	CERBRA	Short-toed Treecreeper	15 April	Others	Open-cup	Above ground	Low
Coccothraustes coccotraustes	COCCOC	Hawfinch	15 April	Others	Open-cup	Above ground	High
Columba palumbus	COLPAL	Common Wood Pigeon	15 April	Others	Open-cup	Ground	High
Cuculus canorus	CUCCAN	Common Cuckoo	15 April	Others	Open-cup	Above ground	High
Cyanistes caeruleus	CYACAE	Eurasian Blue Tit	15 April	Others	Cavity	Above ground	Low
Dendrocopos major	DENMAJ	Great Spotted Woodpecker	15 April	Others	Cavity	Above ground	High
Dendrocopos medius	DENMED	Middle Spotted Woodpecker	15 April	Others	Cavity	Above ground	na
Dendrocopos minor	DENMIN	Lesser Spotted Woodpecker	15 April	Others	Cavity	Above ground	na
Erithacus rubecula	ERIRUB	European Robin	15 April	Others	Ground	Ground	Low
Fringilla coelebs	FRICOE	Common Chaffinch	15 April	Others	Open-cup	Ground	High
Garrulus glandarius	GARGLA	Eurasian Jay	15 April	Others	Open-cup	Above ground	High
Lophophanes cristatus	LOPCRI	European Crested Tit	15 April	Others	Cavity	Above ground	Low
Oriolus oriolus	ORIORI	Eurasian Golden Oriole	10 May	Long-distance migrant	-	-	-

Parus major	PARMAJ	Great Tit	15 April	Others	Cavity	Above ground	Low
Periparus ater	PERATE	Coal Tit	15 April	Others	Cavity	Above ground	Low
Phylloscopus collybita	PHYCOL	Common Chiffchaff	15 April	Others	Ground	Above ground	Low
Phylloscopus sibilatrix	PHYSIB	Wood Warbler	1 May	Long-distance migrant	-	-	-
Phylloscopus trochilus	PHYTRO	Willow Warbler	25 April	Long-distance migrant	-	-	-
Picus canus	PICCAN	Grey-headed Woodpecker	15 April	Others	Cavity	Ground	High
Poecile palustris	POEPAL	Marsh Tit	15 April	Others	Cavity	Above ground	Low
Regulus ignicapilla	REGIGN	Common Firecrest	15 April	Others	Open-cup	Above ground	Low
Regulus regulus	REGREG	Goldcrest	15 April	Others	Open-cup	Above ground	Low
Sitta europaea	SITEUR	Eurasian Nuthatch	15 April	Others	Cavity	Above ground	High
Streptopelia turtur	STRTUR	European Turtle Dove	15 May	Long-distance migrant	-	-	-
Sturnus vulgaris	STUVUL	Common Starling	15 April	Others	Cavity	Ground	High
Sylvia atricapilla	SYLATR	Eurasian Blackcap	15 April	Others	Open-cup	Above ground	Low
Sylvia borin	SYLBOR	Garden Warbler	10 May	Long-distance migrant	-	-	-
Troglodytes troglodytes	TROTRO	Eurasian Wren	15 April	Others	Open-cup	Ground	Low
Turdus merula	TURMER	Common Blackbird	15 April	Others	Open-cup	Ground	High
Turdus philomelos	TURPHI	Song Trush	15 April	Others	Open-cup	Ground	High
Turdus viscivorus	TURVIS	Mistle Trush	15 April	Others	Open-cup	Ground	High

[1]: [36]; [2]: [39]; na: no data available, -: not included in this analysis

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9   **Table S2.** Results of the GLMMs testing the effect of experimental disturbance on the

10   number of territories and species richness according to their nesting guild (Long-distance

11   migrants were not included in these analyses, see electronic supplementary material table S1).

12   Represented are the estimates of the effect of each variable with its corresponding 95%

13   credible intervals (CrI).

Terms	Number of territories		Species richness	
	Estimate	CrI	Estimate	CrI
Intercept	0.0483	-0.3087; 0.3986	1.1631	0.8530; 1.4874
Disturbance				
disturbed	-0.2346	-0.5455; 0.0807	-0.3098	-0.7076; 0.0796
control	/	/	/	/
Guild				
cavity	/	/	/	/
ground	-0.6571	-1.0120; -0.3006	-0.8042	-1.2656; -0.3459
open-cup	0.3208	0.0554; 0.5891	0.3053	-0.0292; 0.6480
Ground vegetation	0.0053	-0.0793; 0.0899	-0.0471	-0.1299; 0.0360
Shrub	0.0779	-0.0266; 0.1821	0.0573	-0.0555; 0.1652
Canopy	0.0288	-0.0787; 0.1341	-0.0451	-0.1716; 0.1652
Tree diversity	-0.0213	-0.1071; 0.0660	-0.0732	-0.1602; 0.0135
Deadwood	-0.0031	-0.0978; 0.0932	0.0057	-0.1096; 0.1213
Road				
presence	0.0556	-0.1013; 0.2101	-0.0081	-0.2001; 0.1772
absence	/	/	/	/
Julian date	-0.1178	-0.2009; -0.0369	-0.0326	-0.1363; 0.0759
Julian date^2	0.0118	-0.0826; 0.1046	0.0229	-0.0944; 0.1363
Year				
2014	/	/	/	/
2015	0.2638	0.0094; 0.5105	0.1381	-0.1785; 0.4572
Split-plot area	-0.0043	-0.0853; 0.0783	0.9629	0.0471; 1.8548
Split-plot area^2	-	-	1.0298	0.0228; 2.0199
Disturbance × Year				
disturbed: 2015	0.1387	-0.2203; 0.4998	0.2598	-0.2037; 0.7344
Guild × Year				
ground: 2015	-0.5492	-0.9891; -0.1033	-0.2793	-0.8464; 0.2898
open-cup: 2015	-0.3911	-0.7079; -0.0620	-0.1872	-0.5968; 0.2193
Disturbance × Guild				
disturbed: ground	0.1008	-0.4181; 0.6215	0.3193	-0.3427; 0.9934
disturbed: open-cup	-0.1343	-0.5497; 0.2759	0.0554	-0.4552; 0.5694
Disturbance × Guild × Year				
disturbed: ground: 2015	0.1248	-0.5289; 0.7614	-0.2708	-1.0868; 0.5439
disturbed: open-cup: 2015	0.0080	-0.4928; 0.5046	-0.2207	-0.8364; 0.3924

/ = Reference categories

- = Parameter not tested in this model

Distribution = Poisson; link function = natural logarithm; random factors = observer, round and split-plot ID nested within plot ID

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16 **Table S3:** Results of the GLMMs testing the effect of the experimental disturbance on the

17 number of territories and species richness according to their sensitivity towards humans

18 according to flight initiation distances (only resident and short-distance migrants were

19 included in these analyses, see electronic supplementary material table S1). Represented are

20 the estimates of the effect of each variable with its corresponding 95% credible intervals

21 (CrI).

Terms		Number of territories		Species richness	
		Estimate	CrI	Estimate	CrI
Intercept		0.2675	-0.0746; 0.6043	1.3662	1.0782; 1.6631
Disturbance					
	disturbed	-0.4433	-0.7342; -0.1508	-0.3408	-0.7058; 0.0209
	control	/	/	/	/
Sensitivity					
	high	/	/	/	/
	low	0.2790	0.0353; 0.5234	0.2582	-0.0578; 0.5698
Ground vegetation		0.0046	-0.0799; 0.0872	-0.0459	-0.1264; 0.0364
Shrub		0.0751	-0.0311; 0.1820	0.0539	-0.0547; 0.1647
Canopy		0.0268	-0.0801; 0.1385	-0.0460	-0.1701; 0.0810
Tree diversity		-0.0223	-0.1106; 0.0623	-0.0762	-0.1627; 0.0087
Deadwood		-0.0065	-0.1021; 0.0897	0.0014	-0.1115; 0.1168
Road					
	presence	0.0533	-0.1003; 0.2092	-0.0150	-0.1983; 0.1699
	absence	/	/	/	/
Julian date		-0.1218	-0.2048; -0.0403	-0.0369	-0.1414; 0.0713
Julian date^2		0.0148	-0.0808; 0.1104	0.0281	-0.0911; 0.1440
Year					
	2014	/	/	/	/
	2015	-0.0535	-0.2850; 0.1811	0.0338	-0.2541; 0.3176
Split-plot area		-0.0060	-0.0893; 0.0742	0.8990	0.0159; 1.8099
Split-plot area^2		-	-	1.0680	0.0500; 2.0681
Disturbance × Year					
	disturbed: 2015	0.2777	-0.0700; 0.6299	0.1470	-0.2918; 0.5915
Sensitivity × Year					
	low: 2015	0.0930	-0.2130; 0.3868	-0.0484	-0.4248; 0.3225
Disturbance × Sensitivity					
	disturbed: low	0.2752	-0.1038; 0.6549	0.1987	-0.2661; 0.6651
Disturbance × Sensitivity × Year					
	disturbed: low: 2015	-0.1892	-0.6374; 0.2749	-0.0634	-0.6258; 0.4978

/ = Reference category

- = Parameter not tested in this model

Distribution = Poisson; link function = natural logarithm; random factors = observer, round and split-plot ID nested within plot ID

22   **Table S4:** Results of the GLMMs testing the effect of experimental disturbance on the

23   number of territories and species richness according to their foraging guild (only resident and

24   short-distance migrants were included in these analyses, see electronic supplementary

25   material table S1). Represented are the estimates of the effect of each variable with its

26   corresponding 95% credible intervals (CrI).

Terms	Number of territories		Species richness	
	Estimate	CrI	Estimate	CrI
Intercept	0.0164	-0.3425; 0.3790	1.1662	0.8441; 1.4838
Disturbance				
disturbed	-0.2922	-0.6133; 0.0225	-0.1403	-0.5187; 0.2421
control	/	/	/	/
Foraging guild				
ground	/	/	/	/
above ground	0.6905	0.4285; 0.9422	0.5933	0.2723; 0.9105
Ground vegetation	0.0051	-0.0785; 0.0883	-0.0467	-0.1286; 0.0360
Shrub	0.0772	-0.0290; 0.1829	0.0575	-0.0504; 0.1644
Canopy	0.0288	-0.0823; 0.1347	-0.0452	-0.1707; 0.0816
Tree diversity	-0.0205	-0.1054; 0.0660	-0.0726	-0.1598; 0.0133
Deadwood	-0.0027	-0.0997; 0.0927	0.0056	-0.1100; 0.1207
Road				
presence	0.0552	-0.1005; 0.2127	-0.0093	-0.1977; 0.1792
absence	/	/	/	/
Julian date	-0.1178	-0.1995; -0.0333	-0.0313	-0.1372; 0.0762
Julian date^2	0.0101	-0.0860; 0.1057	0.0220	-0.0929; 0.1379
Year				
2014	/	/	/	/
2015	-0.2529	-0.5274; 0.0191	-0.1262	-0.4515; 0.1987
Split-plot area	-0.0051	-0.0878; 0.0776	0.9686	0.0647; 1.8545
Split-plot area^2	-	-	1.0306	0.0348; 2.0477
Disturbance × Year				
disturbed: 2015	0.3240	-0.0733; 0.7331	0.0770	-0.3888; 0.5528
Foraging guild × Year				
above ground: 2015	0.3637	0.0398; 0.6917	0.2076	-0.1901; 0.5991
Disturbance × Foraging guild				
disturbed: above ground	0.0234	-0.3597; 0.4042	-0.1368	-0.6103; 0.3280
Disturbance × Foraging guild × Year				
disturbed: above ground: 2015	-0.2227	-0.7073; 0.2558	0.0577	-0.5175; 0.6353

/ = Reference category

- = Parameter not tested in this model

Distribution = Poisson; link function = natural logarithm; random factors = observer, round and split-plot ID nested within plot ID

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