Supplementary material 1

Table S1. List of variables used during calculations of functional diversity indices

Trait	**Description**
Brain_mass_g	continuous variables
Body_mass_g	continuous variables
Residual_brain_size	residuals not explained by differences in body size (continuous variable)
Maximum_lifespan_years	in years
Age_first_reproduction	in years
Incubation_days	average number of incubation days
Clutch_size	typical clutch size
Number_broods_year	usual number of broods per year
Precocial	0 -no (usually not), 1 - yes
Semiprecocial	0 -no (usually not), 1 - yes
Semialtrical	0 -no (usually not), 1 - yes
Altrical	0 -no (usually not), 1 - yes
Food_invertebrate	0 -no (usually not), 1 - yes
Food_plant	0 -no (usually not), 1 - yes
Food_vertebrates	0 -no (usually not), 1 - yes
Forager_canopy	0 -no (usually not), 1 - yes
Forager_shrub	0 -no (usually not), 1 - yes
Forager_bark	0 -no (usually not), 1 - yes
Forager_ground	0 -no (usually not), 1 - yes
Forager_aerial	0 -no (usually not), 1 - yes
Forager_water	0 -no (usually not), 1 - yes
Nest_canopy	0 -no (usually not), 1 - yes
Nest_shrub	0 -no (usually not), 1 - yes
Nest_tree_hole	0 -no (usually not), 1 - yes
Nest_ground	0 -no (usually not), 1 - yes
Nest_anthropogenic_structures	0 -no (usually not), 1 - yes
Resident	0 -no (usually not), 1 - yes
Partial_migrant	0 -no (usually not), 1 - yes
Migrant	0 -no (usually not), 1 - yes
Social_solitary	0 -no (usually not), 1 - yes
Semi_colonial	0 -no (usually not), 1 - yes
Colonial	0 -no (usually not), 1 - yes
Sexual_dimorfism	1 - very little (no recognizable in field conditions) or no dimorphism, 2 - sexual dimorphism visibe (in size or in plumage), 3 - dimorphism very pronounced (in plumage and size)

Table S2. The list of all species and their abundance at churches and farmsteads. Birds are sorted in a decreasing order according the total abundance.

Species	Church	Farmstead	Total
Passer domesticus	414	392	806
Sturnus vulgaris	351	271	622
Corvus monedula	342	175	517
Streptopelia decaocto	180	161	341
Parus major	170	166	336
Turdus pilaris	188	138	326
Hirundo rustica	113	198	311
Passer montanus	155	151	306
Apus apus	292	3	295
Delichon urbicum	234	42	276
Carduelis carduelis	129	104	233
Carduelis chloris	112	95	207
Phoenicurus ochruros	106	101	207
Fringilla coelebs	115	79	194
Turdus merula	91	79	170
Motacilla alba	89	60	149
Carduelis cannabina	75	70	145
Sylvia curruca	50	75	125
Cyanistes caeruleus	49	43	92
Columba liva/domestica	73	11	84
Columba palumbus	58	25	83
Sylvia atricapilla	48	32	80
Serinus serinus	42	27	69
Corvus frugilegus	21	30	51
Turdus philomelos	26	19	45
Pica pica	22	22	44
Sylvia communis	32	10	42
Erithacus rubecula	23	18	41
Phoenicurus phoenicurus	30	8	38
Falco tinnunculus	24	14	38
Emberiza calandra (Miliaria calandra)	20	14	34
Emberiza citrinella	22	11	33
Muscicapa striata	24	7	31
Sitta europaea	17	10	27
Hippolais icterina	15	7	22
Phylloscopus trochilus	10	9	19
Garrulus glandarius	9	9	18
Dendrocopos major	6	6	12
Phylloscopus collybita	7	5	12
Certhia brachydactyla	9	2	11
Aegithalos caudatus	9	1	10
Dendrocopos minor	6	3	9
Coccothraustes coccothraustes	6	3	9

Oriolus oriolus	7	1	8
Corvus cornix	4	4	8
Picus viridis	4	2	6
Sylvia borin	6	0	6
Jynx torquilla	2	3	5
Phasianus colchicus	4	0	4
Oenanthe oenanthe	3	1	4
Ciconia ciconia	1	3	4
Troglodytes troglodytes	3	1	4
Cuculus canorus	2	1	3
Regulus regulus	3	0	3
Luscinia luscinia	0	3	3
Carduelis spinus	2	0	2
Accipiter nisus	1	1	2
Ficedula hypoleuca	2	0	2
Motacilla flava	1	1	2
Larus ridibundus	1	1	2
Phylloscopus sibilatrix	2	0	2
Poecile montanus	0	1	1
Upupa epops	1	0	1
Dendrocopos syriacus	1	0	1
Picus canus	0	1	1
Lanius collurio	1	0	1
Saxicola rubicola	1	0	1
Perdix perdix	0	1	1
Certhia familiaris	0	1	1
Motacilla cinerea	0	1	1
Saxicola rubetra	0	1	1
Poecile palustris	1	0	1
Columba oenas	0	1	1
Streptopelia turtur	1	0	1
Curruca nisoria	1	0	1

Table S3. As in Table 2 but analyses included distance to the nearest town (km) and village size (log-transformed number of inhabitants) to account for a possible effect of the urban-rural gradient. Explanations: Table 2.

Explanatory variables	Intercept	SpecRich	Building type: Church	Distance to town	Village population size	s(Area)
SpecRich	3.49 (0.31)***	Not included	0.39 (0.04)***	-0.016 (0.007)*	-0.01 (0.03)	Df=1.90***
Abundance	4.13 (0.41)***	Not included	0.50 (0.05)***	-0.002 (0.010)	-0.05 (0.05)	Df=1.86***
PhyloDist	75.73 (11.24)**	Not included	16.77 (1.99)***	0.10 (0.29)	4.23 (1.32)**	Df=1.13
FuncRich	22.18 (17.39)	2.02 (0.38)***	3.38 (3.29)	0.09 (1.98)	2.02 (0.38)**	Df=1.00
FuncEven	0.56 (0.11)***	Not included	-0.003 (0.019)	0.001 (0.002)	-0.004 (0.013)	Df=1.15
FuncDiverg	0.65 (0.07)***	Not included	0.001 (0.012)	0.003 (0.002)	0.008 (0.008)	Df=1.34

Fig S1. Photos (Google Corp. 2018) of exemplary pairs of a church and farmstead: Stare Zukowice, Southern Poland (upper panel), Walki Jodłowka, Southern Poland (lower panel). Yellow lines indicate the area delineated by a fence and where bird sampling was done.

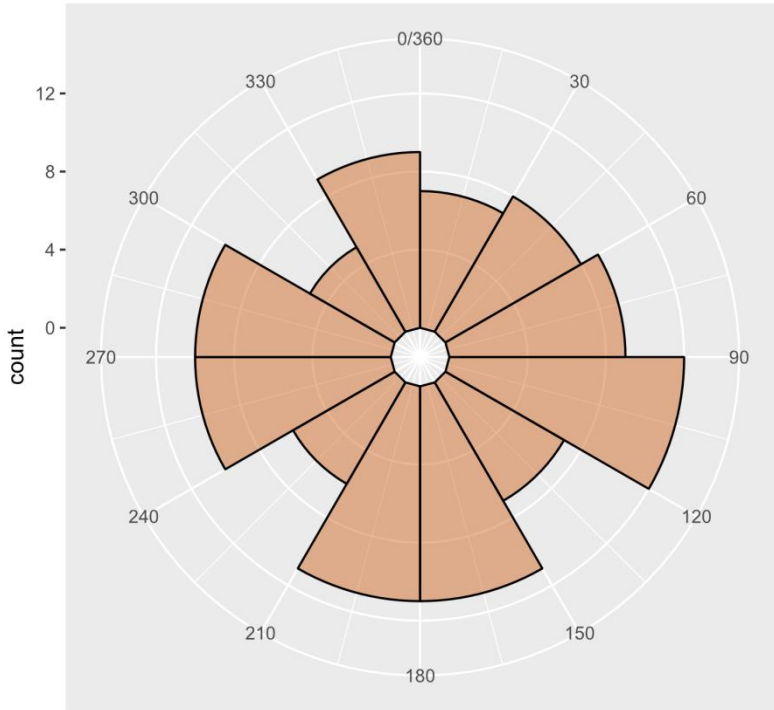

Figure S2. The spatial localization of farmsteads in relation to churches.

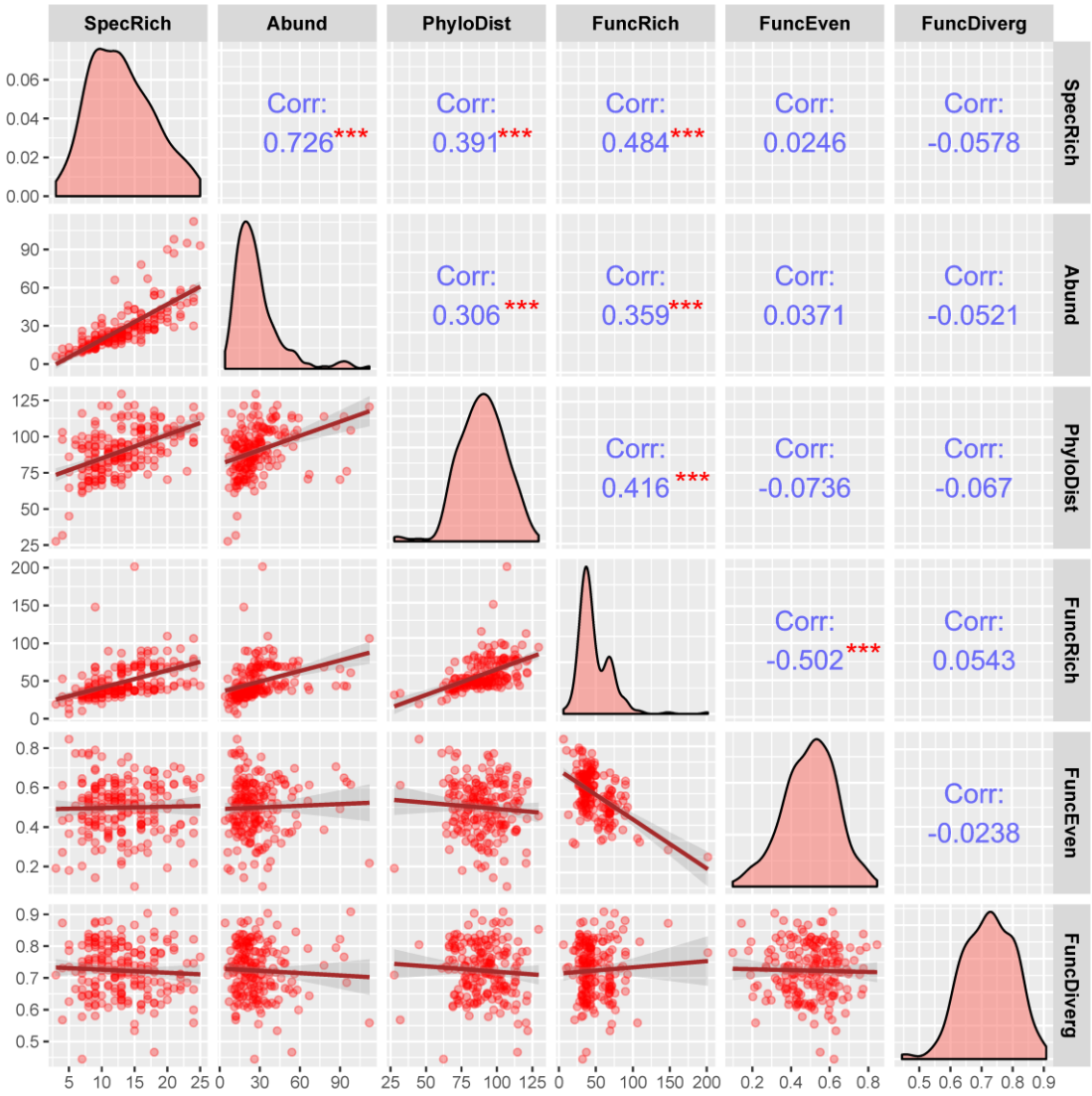

Fig S3. The distribution and correlation matrix of the variables describing bird diversity

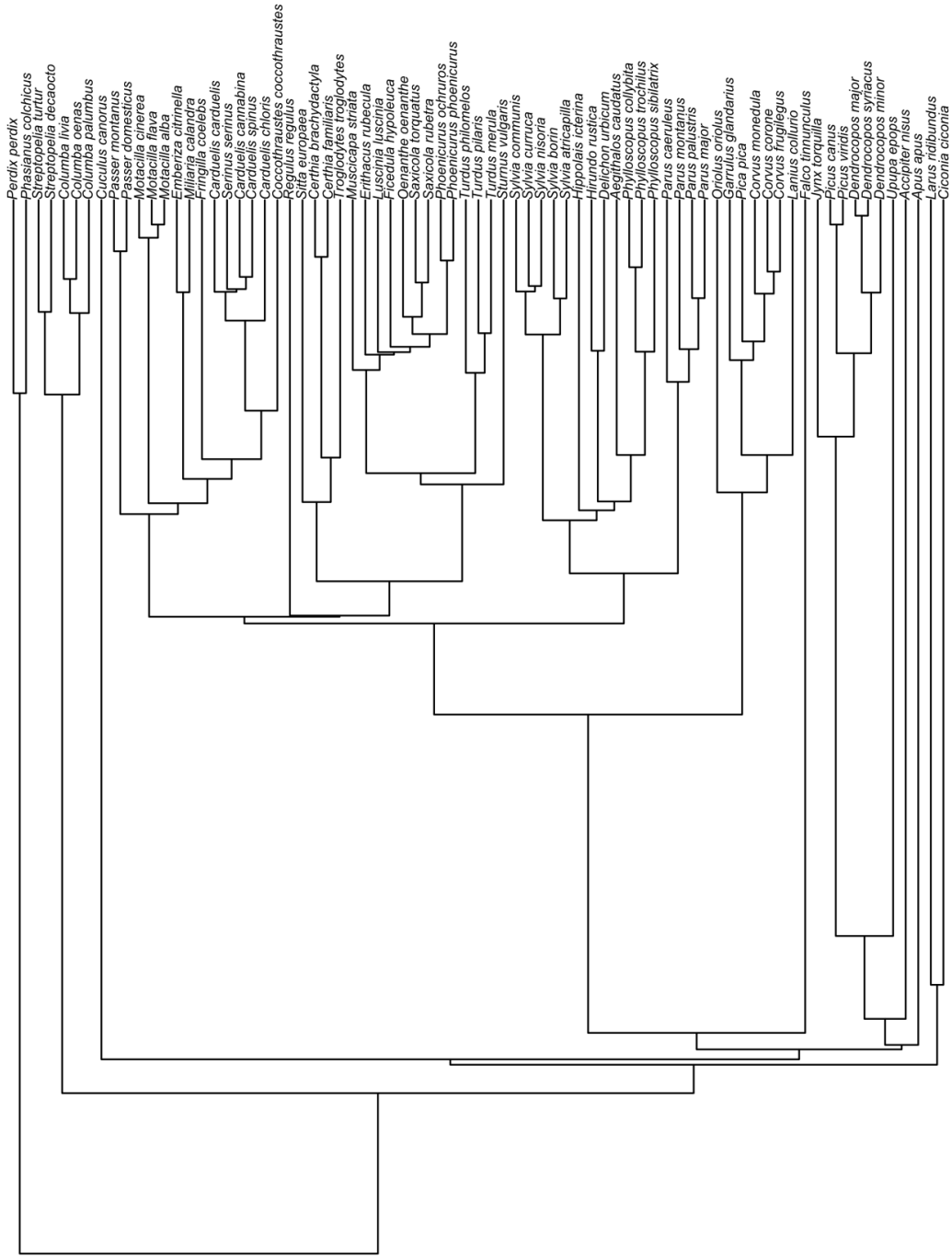

Fig S4. The bird phylogenetic tree used in analyses.

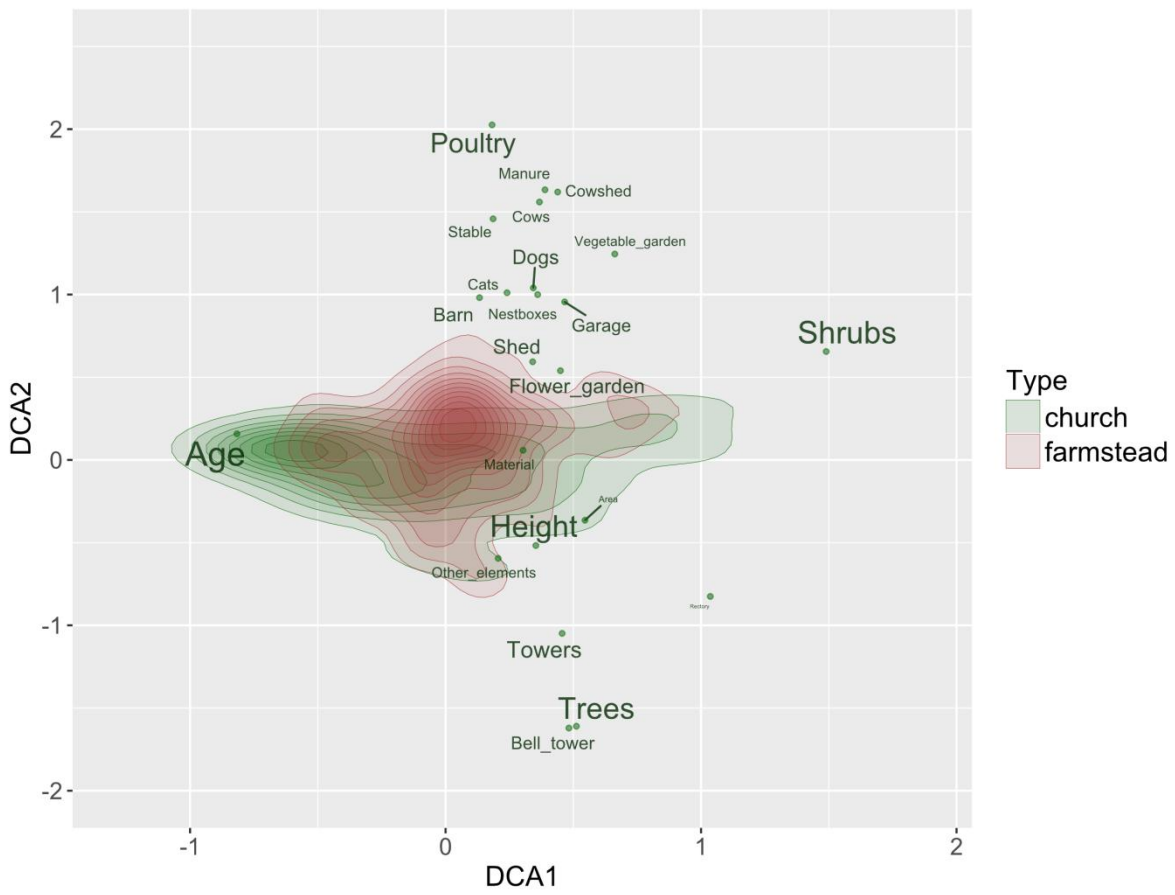

Fig S5. The DCA analysis showing differences in compositional elements (treated here as "species") between churches and farmsteads. The size of labels of environmental variables (compositional and functional elements) are scaled according to their contribution to the separation between two types of site in SIMPER analysis.

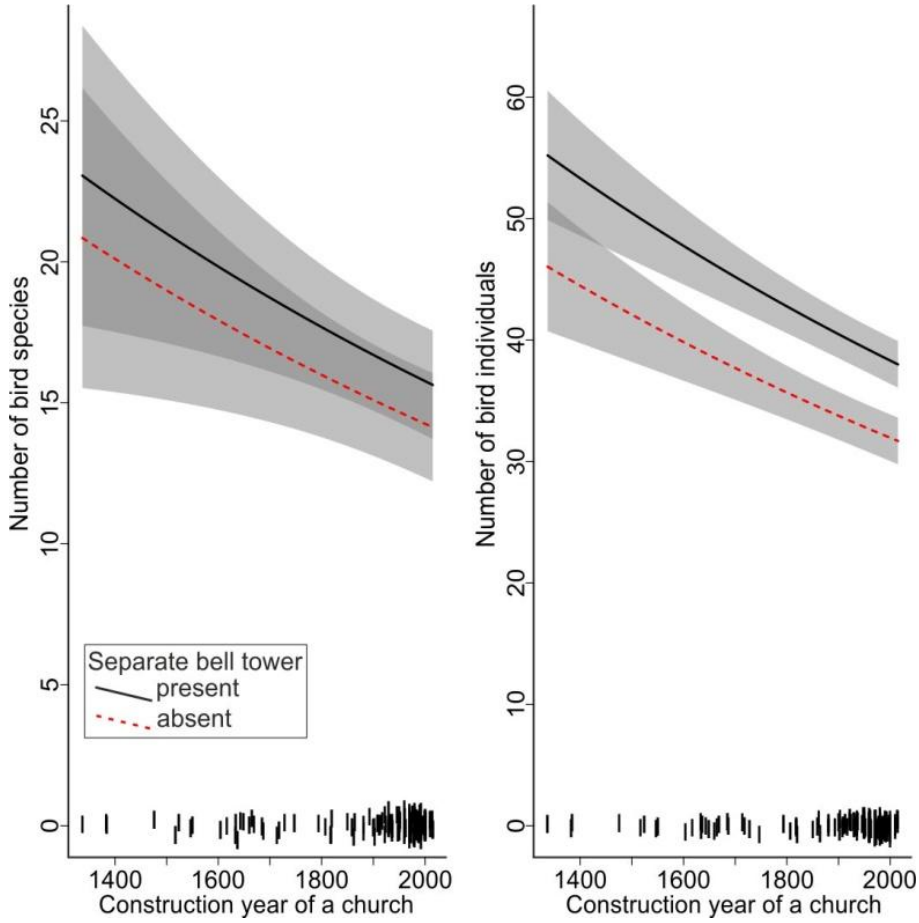

Fig S6. The effect of church age and presence of a separate bell tower on the number of bird species and their abundance.