

## Supplementary Material

**Tab. S1** - Bird species observed across 50 sampling plots in Thracian oak forest stands and their respective feeding guilds, *i.e.*, Carnivorous (Car), Insectivorous (Ins), Granivorous (Gra), Frugivorous (Fru), Omnivorous (Omn).

Bird species	Guild type	Observed Frequency	Bird species	Guild type	Observed Frequency
<i>Accipiter nisus</i>	Car	1	<i>Luscinia megarhynchos</i>	Ins_Fru	5
<i>Buteo buteo</i>	Car	10	<i>Oriolus oriolus</i>	Ins_Fru	3
<i>Caprimulgus europaeus</i>	Ins	6	<i>Parus major</i>	Ins_Gra_Fru	80
<i>Certhia brachydactyla</i>	Ins	33	<i>Phylloscopus bonelli</i>	Ins	8
<i>Coccothraustes coccothraustes</i>	Gra_Fru	2	<i>Phylloscopus collybita</i>	Ins	13
<i>Columba palumbus</i>	Gra_Fru	5	<i>Picus canus</i>	Ins_Gra	5
<i>Corvus corax</i>	Omn	14	<i>Picus viridis</i>	Ins_Gra_Fru	5
<i>Cuculus canorus</i>	Ins	3	<i>Poecile palustris</i>	Ins_Gra_Fru	20
<i>Cyanistes caeruleus</i>	Ins_Gra_Fru	29	<i>Sitta europaea</i>	Ins_Gra	64
<i>Dendrocopos major</i>	Ins_Gra	27	<i>Streptopelia turtur</i>	Gra	3
<i>Dendrocopos medius</i>	Ins_Gra	15	<i>Strix aluco</i>	Car	2
<i>Dryocopus martius</i>	Ins_Gra_Fru	3	<i>Sylvia atricapilla</i>	Ins_Fru	7
<i>Emberiza hortulana</i>	Gra	1	<i>Sylvia communis</i>	Ins_Fru	3
<i>Erithacus rubecula</i>	Ins_Fru	11	<i>Sylvia melanocephala</i>	Ins_Fru	2
<i>Fringilla coelebs</i>	Ins_Gra	207	<i>Tachymarptis melba</i>	Ins	35
<i>Garrulus glandarius</i>	Omn	18	<i>Troglodytes troglodytes</i>	Ins_Gra	3
<i>Hirundo rustica</i>	Ins	13	<i>Turdus merula</i>	Ins_Fru	9
<i>Jynx torquilla</i>	Ins	1	<i>Turdus viscivorus</i>	Ins_Fru	11
<i>Lanius collurio</i>	Car_Ins	15			
<i>Lullula arborea</i>	Ins_Gra	7	Total		699

**Tab. S2** - The coefficients, AICc,  $\Delta$ AICc, and model weight, for each of the top regression models predicting the influence of site factors on bird species richness and diversity. Inclusion of coefficients in a given model is indicated by 1 and lack of inclusion by 0. Coefficients are abbreviated as canopy cover (CC), elevation (E), tree density (TD), mean tree height (TH), mean diameter at breast height (DBH).

Model	CC	E	TD	TH	DBH	AICc	$\Delta$ AICc	weight
<b>Richness</b>	1	1	0	0	1	74.8	0	0.333
	0	1	0	0	1	76.2	1.46	0.16
	0	1	0	1	1	77	2.18	0.112
	0	1	0	1	0	77.4	2.62	0.09
	1	1	0	1	1	77.4	2.64	0.089
	1	1	1	0	1	77.5	2.7	0.086
	0	1	1	1	1	77.9	3.1	0.071
	0	1	1	0	1	78.2	3.43	0.06
<b>Diversity</b>	1	1	0	0	1	70.3	0	0.245
	0	1	0	0	1	70.8	0.42	0.199
	0	1	0	1	0	72.5	2.14	0.084
	0	1	0	1	1	72.6	2.29	0.078
	1	1	1	0	1	72.8	2.45	0.072
	0	1	0	0	0	72.9	2.61	0.067
	1	1	0	1	1	73	2.68	0.064
	0	1	1	0	1	73.2	2.91	0.057
	0	1	1	0	0	73.5	3.13	0.051
	0	1	1	1	1	73.6	3.28	0.048

**Tab. S3** - Bird species observed across 50 sampling plots in Thracian oak forest stands stand type preferences (20 bird species prefer A, 11 species B, 19 species C and 8 species D stands).

<i>Species</i>	<b>Observed frequency</b>	<b>Preferred Stand type</b>
<i>Accipiter nisus</i>	1	A
<i>Buteo buteo</i>	10	A
<i>Caprimulgus europaeus</i>	6	B and C
<i>Certhia brachydactyla</i>	33	C and D
<i>Coccothraustes coccothraustes</i>	2	C
<i>Columba palumbus</i>	5	D
<i>Corvus corax</i>	14	D
<i>Cuculus canorus</i>	3	B and D
<i>Cyanistes caeruleus</i>	29	A and D
<i>Dendrocopos major</i>	27	A
<i>Dendrocopos medius</i>	15	A, B and C
<i>Dryocopus martius</i>	3	A
<i>Emberiza hortulana</i>	1	C
<i>Erithacus rubecula</i>	11	D
<i>Fringilla coelebs</i>	207	A, B and C
<i>Garrulus glandarius</i>	18	C
<i>Hirundo rustica</i>	13	B and C
<i>Jynx torquilla</i>	1	C
<i>Lanius collurio</i>	15	A, B, C
<i>Lullula arborea</i>	7	C
<i>Luscinia megarhynchos</i>	5	C
<i>Oriolus oriolus</i>	3	C
<i>Parus major</i>	80	A, B and C
<i>Phylloscopus bonelli</i>	8	C
<i>Phylloscopus collybita</i>	13	A
<i>Picus canus</i>	5	A, C and D
<i>Picus viridis</i>	5	A
<i>Poecile palustris</i>	20	A
<i>Sitta europaea</i>	64	A and D
<i>Streptopelia turtur</i>	3	B
<i>Strix aluco</i>	2	B and C
<i>Sylvia atricapilla</i>	7	A and B
<i>Sylvia communis</i>	3	A
<i>Sylvia melanocephala</i>	2	A
<i>Tachymarptis melba</i>	35	A
<i>Troglodytes troglodytes</i>	3	A
<i>Turdus merula</i>	9	A, C and D
<i>Turdus viscivorus</i>	11	A
<b>Total</b>	<b>699</b>	

**Tab. S4** - Indicator value of the bird species recorded in the study based on multi-level pattern analysis. Association of a species with a particular stand type is indicated by 1. (\*):  $0.05 < p \leq 0.1$ ; (\*\*):  $p \leq 0.05$ .

<i>Species</i>	<b>Stand Type</b>				<b>Prob.</b>
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	
<i>Accipiter nisus</i>	1	0	0	0	
<i>Buteo buteo</i>	1	0	0	0	*
<i>Caprimulgus europaeus</i>	0	1	1	0	
<i>Certhia brachydactyla</i>	0	0	1	1	
<i>Coccothraustes coccothraustes</i>	0	0	1	0	
<i>Columba palumbus</i>	0	0	0	1	
<i>Corvus corax</i>	0	0	0	1	**
<i>Cuculus canorus</i>	0	1	1	0	
<i>Cyanistes caeruleus</i>	1	0	0	1	
<i>Dendrocopos major</i>	1	0	0	0	
<i>Dendrocopos medius</i>	1	1	1	0	
<i>Dryocopus martius</i>	1	0	0	0	
<i>Emberiza hortulana</i>	0	0	1	0	
<i>Erithacus rubecula</i>	0	0	0	1	
<i>Fringilla coelebs</i>	1	1	1	0	
<i>Garrulus glandarius</i>	0	0	1	0	*
<i>Hirundo rustica</i>	0	1	1	0	
<i>Jynx torquilla</i>	0	0	1	0	
<i>Lanius collurio</i>	1	1	1	0	
<i>Lullula arborea</i>	0	0	1	0	
<i>Luscinia megarhynchos</i>	0	0	1	0	
<i>Oriolus oriolus</i>	0	0	1	0	
<i>Parus major</i>	1	1	1	0	
<i>Phylloscopus bonelli</i>	0	0	1	0	
<i>Phylloscopus collybita</i>	1	0	0	0	*
<i>Picus canus</i>	1	0	1	1	
<i>Picus viridis</i>	1	0	0	0	
<i>Poecile palustris</i>	1	0	0	0	
<i>Sitta europaea</i>	1	0	0	1	**
<i>Streptopelia turtur</i>	0	1	0	0	
<i>Strix aluco</i>	0	1	1	0	
<i>Sylvia atricapilla</i>	1	1	0	0	
<i>Sylvia communis</i>	1	0	0	0	
<i>Sylvia melanocephala</i>	1	0	0	0	
<i>Tachymartitis melba</i>	1	0	0	0	*
<i>Troglodytes troglodytes</i>	1	0	0	0	
<i>Turdus merula</i>	0	1	1	1	
<i>Turdus viscivorus</i>	1	0	0	0	*
<b>Total</b>	<b>20</b>	<b>11</b>	<b>19</b>	<b>8</b>	