S2 Table. The results of GLMM examining how eight acoustic indices reflect bird species richness, season, and time of day, using the dataset of 840 pre-processed 5-min sound samples.

	Model	k	AIC_c	ΔAIC_c	AIC_cw	log(L)
nACI						
1	Richness + Season + Hour + Random effect	6	-3688.10	14.15	0.00	1850.10
2	Richness + Season + Random effect	5	-3702.25	0.00	0.84	1856.16
3	Richness + Hour + Random effect	5	-3698.88	3.37	0.16	1854.48
ADI						
1	Richness + Season + Hour + Random effect	6	1160.82	0.35	0.46	-574.36
2	Richness + Season + Random effect	5	1160.47	0.00	0.54	-575.20
3	Richness + Hour + Random effect	5	1210.47	50.00	0.00	-600.20
LRT. 1 *vs* 2: X^2=10.763, d.f.=1, p=0.0010						
1-AEI						
1	Richness + Season + Hour + Random effect	6	-475.08	0.00	0.87	243.59
2	Richness + Season + Random effect	5	-471.27	3.81	0.13	240.67
3	Richness + Hour + Random effect	5	-446.98	28.10	0.00	228.53
LRT. 1 *vs* 2: X^2=5.843, d.f.=1, p =0.0156						
BI						
1	Richness + Season + Hour + Random effect	6	4287.74	0.00	0.57	-2137.82
2	Richness + Season + Random effect	5	4288.33	0.59	0.43	-2139.13
3	Richness + Hour + Random effect	5	4308.80	21.06	0.00	-2149.37
LRT. 1 *vs* 2: X^2=7.951, d.f.=1, p=0.0048						
H						
1	Richness + Season + Hour + Random effect	6	-2542.09	0.00	0.77	1277.09
2	Richness + Season + Random effect	5	-2539.14	2.95	0.18	1274.60
3	Richness + Hour + Random effect	5	-2536.88	5.21	0.06	1273.47
LRT. 1 *vs* 2: X^2=4.979, d.f.=1, p=0.0257						
Ht						
1	Richness + Season + Hour + Random effect	6	-5292.30	0.00	0.77	2652.20
2	Richness + Season + Random effect	5	-5289.89	2.41	0.23	2649.98
3	Richness + Hour + Random effect	5	-5280.91	11.39	0.00	2645.49
LRT. 1 *vs* 2: X^2=4.436, d.f.=1, p =0.0352						
Hf						
1	Richness + Season + Hour + Random effect	6	-2632.26	0.00	0.65	1322.18

2	Richness + Season + Random effect	5	-2629.71	2.54	0.18	1319.89
3	Richness + Hour + Random effect	5	-2629.46	2.79	0.16	1319.77

LRT. 1 *vs* 2: X^2=4.574, *d.f.*=1, *p*=0.0325

LRT. 1 *vs* 3: X^2=4.824, *d.f.* =1, *p*=0.0281

AR

1	Richness + Season + Hour + Random effect	6	-59.78	0.00	1.00	35.94
2	Richness + Season + Random effect	5	-37.18	22.60	0.00	23.63
3	Richness + Hour + Random effect	5	21.35	81.13	0.00	-5.64

We specified the acoustic index as the dependent variable, bird species richness, season, and time of day as fixed effects, and the recording point as the random effect. A common set of three models were fitted: full model (Richness + Season + Hour + Random effect), and fixed effects models (Richness + Season + Random effect; Richness + Hour + Random effect). Normalized Acoustic Complexity index (nACI), Acoustic Diversity index (ADI), Inverse Acoustic Evenness index (1-AEI), Bioacoustic index (BI), Acoustic Entropy index (H), Temporal Entropy Index (Ht), Spectral Entropy Index (Hf), and Acoustic Richness Index (AR). For each model is indicated: k, the number of parameters; AIC_c, corrected Akaike Information Criterion; ΔAIC_c, difference in AIC_c values between each model with the lowest AIC_c model; $AIC_c w$, AIC_c weight; and log(L), the log-likelihood. Random effect: (1|Site). LRT, Likelihood-ratio test.