**SUPPLEMENTARY MATERIAL**

**Influence of colony traits on ectoparasite infestation in birds breeding in mixed-species colonies**

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**Content:**

**- Supplementary Figure S1**

**- Supplementary Table S1 and Table S2**

**Gameiro et al. Supplementary Figure S1.**



Figure S1: Principal Component Analysis (PCA) correlation biplot (scaling 2) on the relationship between colony traits: richness, size, density, and composition (divided in the number of F. naumanni, C. garrulus, C. livia, and S. unicolor nests). Julian date and brood size also included. Arrows show the direction and relationship between the variables. Dots refer to individual nests.

**Gameiro et al. Supplementary Table S1 and Table S2.**

Table S1: Models with ΔAICc <2 after model averaging on the effect of colony traits *on Carnus hemapterus* abundance using nests from all four host species.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Models | d.f. | ΔAICc | Weight | AICc |
| 1. Number of lesser kestrel nests + number of starling nests + number of nestlings + host species | 9 | 0.00 | 0.272 | 1653.5 |
| 2. Number of starling nests + number of nestlings + host species | 8 | 1.67 | 0.118 | 1655.2 |

Table S2: Two top models on the effect of colony traits on Carnus hemapterus abundance in mixed-species colonies using nests from all four host species.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | SD | Estimate | SE | z | P-value |
| **Model 1** |  |  |  |  |  |
| Colony ID | 0.052  |  |  |  |  |
| Intercept  |  | 0.721 | 0.268 | 2.686 | 0.007 |
| # Lesser kestrel nests |  | 0.144 | 0.073 | 1.962 | 0.050 |
| # starling nests |  | -0.202 | 0.080 | -2.536 | 0.011 |
| Number of nestlings |  | 0.286 | 0.088 | 3.235 | 0.001 |
| Host species roller |  | 3.090 | 0.356 | 8.673 | <0.001 |
| Host species lesser kestrel |  | 2.137 | 0.300 | 7.118 | <0.001 |
| Host species starling |  | 0.911 | 0.306 | 2.982 | 0.003 |
| **Model 2** |  |  |  |  |  |
| Colony ID | 0.109 |  |  |  |  |
| Intercept (host species pigeon) |  | 0.684 | 0.272 | 2.510 | 0.012 |
| # starling nests |  | -0.185 | 0.085 | -2.177 | 0.030 |
| Number of nestlings |  | 0.262 | 0.089 | 2.938 | 0.003 |
| Host species roller |  | 3.065 | 0.363 | 8.443 | <0.001 |
| Host species lesser kestrel |  | 2.191 | 0.304 | 7.203 | <0.001 |
| Host species starling |  | 0.953 | 0.310 | 3.073 | 0.002 |