Nest secondary plants and their associations with haemosporidian blood parasites in blue tit females

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*Supplementary General procedures*

During the breeding season, we performed a parallel study, in which we placed feeders inside nest-boxes to supplement females with carotenoids (mainly lutein mixed with fat) prior and during egg laying (for details, see García-Campa *et al*. 2020). In brief, lutein was provided every second day until the onset of incubation, and each dosage consisted of 50 mg of Versele Laga Yel-lux Oropharma (lutein 8,000 mg/kg), which corresponds to 0.4 mg of lutein. Each lutein dose was mixed with 5 g of commercial fat with nuts (GRANA Oryx). Control nests received the same amount of fat but without lutein.

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| **Species** | **Before incubation**  ***Vs***  **Incubation** | **Incubation**  ***Vs***  **Nestling period** | **Before incubation**  ***Vs***  **Nestling period** |
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| *Lavandula* sp. | *X2* (1, 67) = 1.05  *P* = 0.31 | *X2* (1, 67) = 15.39  ***P* < 0.0001** | *X2* (1, 66) =  ***P* < 0.0001** |
| *Anthriscus* sp. | *X2* (1, 67) = 4.30  ***P* = 0.038** | *X2* (1, 67) = 3.75  *P* = 0.053 | *X2* (1, 66) = 0.02  *P* = 0.89 |
| *Thymus* sp | *X2* (1, 67) = 0.15  *P* = 0.70 | *X2* (1, 67) = 14.55  ***P* < 0.0001** | *X2* (1, 66) = 16.81  ***P* < 0.0001** |
| *Achillea* sp. | *X2* (1, 67) = 0.18  *P* = 0.69 | *X2* (1, 67) = 0.81  *P* = 0.37 | *X2* (1, 66) = 0.22  *P* = 0.64 |
| *Teucrium* sp. | *X2* (1, 67) = 0.18  *P* = 0.67 | *X2* (1, 67) = 0.0001  *P* =0.98 | *X2* (1, 66) = 0.09  *P* =0.77 |
| *Lamium* sp. | *X2* (1, 67) = 0.61  *P* = 0.44 | *X2* (1, 67) = 1.67  *P* = 0.20 | *X2* (1, 66) = 4.06  ***P* = 0.044** |
| *Clinopodium* sp. | *X2* (1, 67) = 0.34  *P* = 0.56 | *X2* (1, 67) = 0.58  *P* = 0.45 | *X2* (1, 66) = 2.19  *P* = 0.14 |
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**Table S1.** Chi-square tests comparing the occurrence of the seven plant genera (*Lavandula* sp., *Anthriscus* sp., *Thymus* sp., *Achillea* sp., *Teucrium* sp., *Lamium* sp., and *Clinopodium* sp.) between the different periods: i) before incubation *Vs* incubation, ii) incubation *Vs* nestling period, and iii) before incubation *Vs* nestling period). Significant results are marked in bold (*P* < 0.05). See also Table 1, for the percentages in the different periods.

**Table S2.** Final Generalized linear models (GLMs) with binomial error distribution and negative binomial distribution (i.e., *Protocalliphora* abundance) showing the associations of the different plant variables regardless of plant genera (i.e., final plant dry mass and mean number of fragments during three reproductive stages) with the females’ haemosporidian infection (i.e., *Plasmodium*, *Haemoproteus* and *Leucocytozoon*) and with nest-dwelling ectoparasites (i.e., *Protocalliphora* and *Dermanyssus*). This table includes the full models with all predictor variables (i.e., including lutein treatment, female mass and laying date). Coefficients are shown for lutein nests and significant effects (*P* < 0.05) are marked in bold.

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|  |  | ***Plasmodium*** | ***Haemoproteus*** | ***Leucocytozoon*** | ***Protocalliphora***  **(presence/absence)** | | ***Protocalliphora***  **(number)** | ***Dermanyssus*** |
| **PRE-INCUBATION** | *(Intercept)* | *coef.* = -3.64 ± 6.05*P* = 0.55 | *coef.* = 1.07 ± 5.99 *P* = 0.86 | *coef.* = 3.05 ± 7.00 *P* = 0.66 | *coef.* = -1.09 ± 6.35 *P* = 0.86 | | *coef.* = -1.30 ± 5.28  *P* = 0.81 | *coef.* = -4.38 ± 6.71 *P* = 0.51 |
| ***Mean of plants*** | *χ²₁* = 4.92 *coef.* = -1.10 ± 0.53 ***P* = 0.039** | *χ²₁* = 3.28 *coef.* = -0.87 ± 0.50 *P* = 0.080 | *χ²₁* = 0.31 *coef.* = 0.28 ± 0.50 *P* = 0.57 | *χ²₁* = 3.48 *coef.* =-0.92 ± 0.52 *P* = 0.076 | | *χ²₁* = 2.87 *coef.* =-0.95 ± 0.44 ***P* = 0.030** | *χ²₁* = 1.60 *coef.* = -0.75 ± 0.64 *P* = 0.24 |
| ***Lutein*** | *χ²₁* = 0.09 *coef.* = 0.08 ± 0.28  *P* = 0.77 | *χ²₁* = 0.26 *coef.* = 0.14 ± 0.28 *P* = 0.61 | *χ²₁* = 1.74 *coef.* = 0.46 ± 0.36 *P* = 0.21 | *χ²₁* = 2.14 *coef.* = -0.42 ± 0.29  *P* = 0.15 | | *χ²₁* = 0.62 *coef.* = -0.19 ± 0.24  *P* =0.44 | *χ²₁* = 0.90 *coef.* = 0.30 ± 0.32  *P* = 0.35 |
| ***Female mass*** | *χ²₁* = 0.84 *coef.* = 0.52 ± 0.57 *P* = 0.37 | *χ²₁* = 0.02 *coef. =* 0.08 ± 0.56 *P* = 0.89 | *χ²₁* = 0.17 *coef.* = -0.26 ± 0.65 *P* = 0.69 | *χ²₁* = 0.27 *coef.* = 0.31 ± 0.60 *P* = 0.60 | | *χ²₁* = 0.30 *coef.* = 0.31 ± 0.50 *P* = 0.54 | χ²₁ = 0.24 *coef.* = 0.31 ± 0.64 *P* = 0.62 |
| ***Laying date*** | *χ²₁* = 0.62 *coef.* = -0.07 ± 0.09 *P* = 0.44 | *χ²₁* =0.88 *coef.* = -0.08 ± 0.09 *P* = 0.35 | *χ²₁* = 2.04 *coef.* = -0.16 ± 0.11 *P* = 0.16 | *χ²₁* = 1.13 *coef.* = -0.10 ± 0.09 *P* = 0.29 | | *χ²₁* = 0.06 *coef.* = 0.02 ± 0.08 *P* = 0.79 | *χ²₁ =* 0.11 *coef*. = 0.03 ± 0.10 *P* = 0.74 |
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| **INCUBATION** | *(Intercept)* | *coef.* = -5.72 ± 5.92 *P* = 0.33 | *coef.* = -1.29 ± 5.92 *P* = 0.83 | *coef.* = 3.42 ± 6.91 *P* = 0.62 | *coef.* = -2.04 ± 6.22 *P* = 0.74 | | *coef.* = 0.01 ± 5.45 *P* = 0.99 | *coef.* = -5.39 ± 6.75 *P* = 0.42 |
| ***Mean of plants*** | *χ²₁* = 0.71 *coef.* = -0.17 ± 0.20 *P* = 0.41 | *χ²₁* = 0.99 *coef.* = -0.20 ± 0.20 *P* = 0.32 | *χ²₁* = 0.39 *coef.* = -0.15 ± 0.25 *P* = 0.55 | *χ²₁* = 0.05 *coef.* = 0.05 ± 0.21 *P* = 0.82 | | *χ²₁* = 0.0003 *coef.* = 0.004 ± 0.18 *P* = 0.98 | *χ²₁* = 0.82 *coef.* = -0.05 ± 0.23 *P* = 0.82 |
| ***Lutein*** | *χ²₁* = 0.01 *coef.* = 0.03 ± 0.27 *P* = 0.92 | *χ²₁* = 0.12 *coef.* = 0.10 ± 0.27  *P* = 0.73 | *χ²₁* = 2.10 *coef.* = 0.50 ± 0.37  *P* = 0.17 | *χ²₁* = 2.71 *coef.* = -0.46 ± 0.29  *P* = 0.11 | | *χ²₁ =* 0.69 *coef.* =-0.20 *±* 0.25 *P* = 0.41 | *χ²₁* = 0.41 *coef.* = 0.26 ± 0.32  *P* = 0.42 |
| ***Female mass*** | *χ²₁* = 1.37 *coef.* = 0.65 ± 0.57 *P* = 0.25 | *χ²₁* = 0.22 *coef.* = 0.27 ± 0.57 *P* = 0.64 | *χ²₁* = 0.15 *coef.* = -0.25 ± 0.65 *P* = 0.70 | *χ²₁* = 0.26 *coef.* = 0.30 ± 0.60 *P* = 0.61 | | *χ²₁* = 0.05 *coef.* = 0.14 ± 0.53 *P* = 0.79 | *χ²₁* = 0.57 *coef.* = 0.36 ± 0.65 *P* = 0.57 |
| ***Laying date*** | *χ²₁* = 0.16 *coef.* = -0.03 ± 0.08 *P* = 0.69 | *χ²₁* = 0.44 *coef.* = -0.06 ± 0.08 *P* = 0.51 | *χ²₁* = 2.72 *coef.* = -0.18 ± 0.11 *P* = 0.11 | *χ²₁* = 0.32 *coef.* = -0.05 ± 0.09 *P* = 0.57 | | *χ²₁* = 0.07 *coef.* = 0.02 ± 0.08 *P* = 0.79 | *χ²₁* = 0.57 *coef.* = 0.05 ± 0.10 *P* = 0.57 |
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|  |  | ***Plasmodium*** | ***Haemoproteus*** | ***Leucocytozoon*** | ***Protocalliphora***  **(presence/abundance)** | ***Protocalliphora***  **(number)** | ***Dermanyssus*** |
| **NESTLING** | *(Intercept)* | *coef.* = -4.61 ± 5.86 *P* = 0.43 | *coef.* = -1.02 ± 5.86 *P* = 0.86 | *coef.* = 3.20 ± 6.94 *P* = 0.65 | *coef.* = -2.64 ± 6.31 *P* = 0.68 | *coef.* = -0.97 ± 5.44 *P* = 0.86 | *coef.* = -5.23 ± 6.75 *P* = 0.44 |
| ***Mean of plants*** | *χ²₁* = 0.03 *coef.* = 0.01 ± 0.30 *P* = 0.86 | *χ²₁* = 0.12 *coef.* = -0.01 ± 0.03 *P* = 0.73 | *χ²₁* = 0.08 *coef.* = -0.01 ± 0.03 *P* = 0.78 | *χ²₁* = 0.10 *coef.* = -0.01 ± 0.03 *P* = 0.76 | *χ²₁* = 0.24 *coef.* = -0.02 ± 0.03 *P* = 0.49 | *χ²₁* = 0.004 *coef.* = -0.002 ± 0.03 *P* = 0.95 |
| ***Lutein*** | *χ²₁* = 0.03 *coef.* = -0.04 ± 0.27  *P* = 0.87 | *χ²₁* = 0.19 *coef.* = 0.12 ± 0.27 *P* = 0.66 | *χ²₁* = 1.73 *coef.* = 0.46 ± 0.36  *P* = 0.21 | *χ²₁* = 2.62 *coef.* = -0.45 ± 0.29  *P* = 0.11 | *χ²₁ =* 0.46 *coef. =* -0.17 ±0.24 *P =* 0.49 | *χ²₁* = 0.67 *coef.* = 0.25 ± 0.32  *P* = 0.42 |
| ***Female mass*** | *χ²₁* = 0.87 *coef.* = 0.51 ± 0.56 *P* = 0.36 | *χ²₁* = 0.14 *coef.* = 0.20 ± 0.56 *P* = 0.72 | *χ²₁* = 0.14 *coef.* = -0.24 ± 0.66 *P* = 0.71 | *χ²₁* = 0.40 *coef.* = 0.38 ± 0.61 *P* = 0.53 | *χ²₁* = 0.15 *coef.* = 0.24 ± 0.53 *P* = 0.65 | *χ²₁* = 0.28 *coef.* = 0.34 ± 0.64 *P* = 0.60 |
| ***Laying date*** | *χ²₁* = 0.10 *coef.* = -0.03 ± 0.08 *P* = 0.76 | *χ²₁* = 0.27 *coef.* = -0.04 ± 0.08 *P* = 0.61 | *χ²₁* = 2.50 *coef.* = -0.17 ± 0.11 *P* = 0.13 | *χ²₁* = 0.41 *coef.* = -0.05 ± 0.09 *P* = 0.52 | *χ²₁* = 0.14 *coef.* = 0.03 ± 0.08 *P* = 0.69 | *χ²₁* = 0.37 *coef.* = 0.06 ± 0.09 *P* = 0.55 |
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| **FINAL PLANT**  **DRY MASS** | *(Intercept)* | *coef.* = -5.98 ± 6.42 *P* = 0.35 | *coef.* = 0.11 ± 6.24 *P* = 0.99 | *coef.* = -0.19 ± 7.45 *P* = 0.98 | *coef.* = -1.34 ± 6.37 *P* = 0.83 | *coef.* = 2.00 ± 5.56  *P* = 0.72 | *coef.* = -7.45 ± 6.91 *P* = 0.28 |
| ***Plant dry mass*** | *χ²₁* = 1.46 *coef.* = 0.01 ± 0.01 *P* = 0.24 | *χ²₁* = 0.03 *coef.* = 0.002 ± 0.01 *P* = 0.86 | *χ²₁* = 0.59 *coef.* = 0.01 ± 0.01 *P* = 0.44 | *χ²₁* = 0.27 *coef.* = -0.01 ± 0.01 *P* = 0.60 | *χ²₁* = 0.77 *coef.* = -0.01 ± 0.01 *P* = 0.33 | *χ²₁* = 1.52 *coef.* = 0.01 ± 0.01 *P* = 0.21 |
| ***Lutein*** | *χ²₁* = 0.13 *coef.* = -0.10 ± 0.28  *P* = 0.72 | *χ²₁* = 0.12 *coef.* = 0.10 ± 0.27  *P* = 0.73 | *χ²₁* = 1.55 *coef.* = 0.44 ± 0.37  *P* = 0.23 | *χ²₁* = 2.37 *coef.* = -0.43 ± 0.29  *P* = 0.13 | *χ²₁ =* 0.69 *coef. =* -0.20 ± 0.25 *P =* 0.42 | *χ²₁* = 0.36 *coef.* = 0.19 ± 0.32  *P* = 0.56 |
| ***Female mass*** | *χ²₁* = 1.10 *coef.* = 0.63 ± 0.61 *P* = 0.30 | *χ²₁* = 0.01 *coef.* = 0.07 ± 0.59 *P* = 0.91 | *χ²₁* = 0.02 *coef.* = 0.10 ± 0.71 *P* = 0.90 | *χ²₁* = 0.18 *coef.* = 0.25 ± 0.61 *P* = 0.68 | *χ²₁* = 0.0002 *coef.* = -0.01 ± 0.53 *P* = 0.99 | *χ²₁* = 0.70 *coef.* = 0.54 ± 0.65 *P* = 0.41 |
| ***Laying date*** | *χ²₁* = 0.05 *coef.* = -0.02 ± 0.08 *P* = 0.82 | *χ²₁* = 0.17 *coef.* = -0.03 ± 0.08 *P* = 0.68 | *χ²₁* = 2.78 *coef.* = -0.18 ± 0.11 *P* = 0.11 | *χ²₁* = 0.40 *coef.* = -0.05 ± 0.09 *P* = 0.53 | *χ²₁* = 0.01 *coef.* = -0.01 ± 0.07 *P* = 0.92 | *χ²₁* = 0.40 *coef.* = 0.06 ± 0.09 *P* = 0.53 |
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**Table S3.** Final Generalized linear models (GLMs) with binomial error showing the effects of the presence of green plants per plant species (a) *Achillea* sp., b) *Lavandula* sp., c) *Anthriscus* sp., d) *Teucrium* sp., e) *Thymus* sp., f) *Lamium* sp. on blood parasite occurrence (i.e., *Plasmodium*, *Haemoproteus* and *Leucocytozoon*) and nest-dwelling ectoparasites (i.e., *Protocalliphora* and *Dermanyssus*) provided by blue tit females before the incubation, incubation and nestling period. These tables include the full models show in Table 2, but here including all predictor variables (i.e., female mass and laying date). Significant effects (P < 0.05) are marked in bold. Models for the abundance of *Protocalliphora* blowflies are shown in Table S5.

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| 1. ***Achillea* sp. before incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | | ***Dermanyssus*** | | | |
|  | | | | |  | | | | | | | | |  | | | | | | | |  | | | | | | | |  | | | | | | | | |  | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.58 | | 6.13 | | | 0.455 |  | | | | | 0.42 | 6.14 | | 0.946 | | | |  | 2.13 | | 6.74 | | 0.753 | | |  | | -0.65 | 6.17 | | 0.916 |  | | | | | | -5.77 | 6.69 | 0.389 |
| *Achillea* sp. presence | 5.73 | -1.82 | | 0.85 | | | **0.031** | 4.79 | | | | | -1.58 | 0.76 | | **0.037** | | | | 1.23 | -1.11 | | 1.12 | | 0.32 | | | 2.61 | | -1.20 | 0.77 | | 0.118 | 1.22 | | | | | | -1.10 | 1.11 | 0.323 |
| Female mass | 0.99 | 0.57 | | 0.58 | | | 0.331 | 0.05 | | | | | 0.13 | 0.58 | | 0.829 | | | | 0.01 | -0.05 | | 0.63 | | 0.936 | | | 0.06 | | 0.15 | 0.59 | | 0.80 | 0.53 | | | | | | 0.46 | 0.64 | 0.468 |
| Laying date | 0.39 | -0.05 | | 0.08 | | | 0.533 | 0.78 | | | | | -0.08 | 0.09 | | 0.38 | | | | 4.54 | -0.22 | | 0.11 | | **0.047** | | | 0.10 | | -0.03 | 0.08 | | 0.751 | 0.02 | | | | | | 0.01 | 0.09 | 0.885 |
| Observations | | |  | | | 64 | |  | | | | | | | 64 | | | | |  | | | | 64 | | |  | | | | | 62 | |  | | | | | | | 62 | |
| R2 Tjur | | |  | | | 0.114 | |  | | | | | | | 0.088 | | | | |  | | | | 0.084 | | |  | | | | | 0.045 | |  | | | | | | | 0.028 | |
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| 1. ***Achillea* sp. incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | | ***Dermanyssus*** | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -5.76 | | 5.96 | | | 0.334 |  | | | | | -0.68 | 5.84 | | 0.907 | | | |  | 2.88 | | 6.70 | | 0.668 | | |  | | -2.50 | 5.98 | | 0.676 |  | | | | | | -4.98 | 6.58 | 0.449 |
| *Achillea* sp. presence | 4.60 | -1.51 | | 0.75 | | | **0.044** | 1.45 | | | | | -0.81 | 0.67 | | 0.23 | | | | 0.13 | -0.30 | | 0.86 | | 0.728 | | | 0.20 | | 0.30 | 0.69 | | 0.659 | 0.61 | | | | | | -0.63 | 0.84 | 0.456 |
| Female mass | 1.36 | 0.65 | | 0.57 | | | 0.252 | 0.12 | | | | | 0.19 | 0.55 | | 0.731 | | | | 0.09 | -0.18 | | 0.63 | | 0.77 | | | 0.29 | | 0.31 | 0.57 | | 0.591 | 0.32 | | | | | | 0.35 | 0.63 | 0.574 |
| Laying date | 0.07 | -0.02 | | 0.08 | | | 0.786 | 0.33 | | | | | -0.05 | 0.08 | | 0.568 | | | | 3.05 | -0.17 | | 0.10 | | 0.10 | | | 0.11 | | -0.03 | 0.08 | | 0.738 | 0.21 | | | | | | 0.04 | 0.09 | 0.647 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | |  | | | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.088 | |  | | | | | | | 0.031 | | | | |  | | | | 0.051 | | |  | | | | | 0.01 | |  | | | | | | | 0.017 | |
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| 1. ***Achillea* sp. nestling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | | ***Dermanyssus*** | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.91 | | 5.83 | | | 0.40 |  | | | | | -0.65 | 5.76 | | 0.911 | | | |  | 1.86 | | 6.91 | | 0.788 | | |  | | -2.65 | 6.00 | | 0.658 |  | | | | | | -3.44 | 6.53 | 0.60 |
| *Achillea* sp. presence | 1.42 | -0.93 | | 0.80 | | | 0.24 | 0.01 | | | | | 0.06 | 0.78 | | 0.939 | | | | 4.73 | -17.59 | | 2252.54 | | 0.994 | | | 0.01 | | 0.06 | 0.82 | | 0.941 | 4.63 | | | | | | -16.72 | 1493.68 | 0.991 |
| Female mass | 1.06 | 0.56 | | 0.55 | | | 0.31 | 0.10 | | | | | 0.17 | 0.54 | | 0.757 | | | | 0.01 | -0.06 | | 0.66 | | 0.925 | | | 0.33 | | 0.33 | 0.57 | | 0.568 | 0.10 | | | | | | 0.20 | 0.63 | 0.748 |
| Laying date | 0.10 | -0.03 | | 0.08 | | | 0.748 | 0.33 | | | | | -0.05 | 0.08 | | 0.565 | | | | 3.19 | -0.18 | | 0.10 | | 0.09 | | | 0.11 | | -0.03 | 0.08 | | 0.74 | 0.25 | | | | | | 0.05 | 0.09 | 0.616 |
| Observations | | |  | | | 64 | |  | | | | | | | 64 | | | | |  | | | | 64 | | |  | | | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.041 | |  | | | | | | | 0.008 | | | | |  | | | | 0.098 | | |  | | | | | 0.008 | |  | | | | | | | 0.052 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| 1. ***Lavandula* sp. before incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -5.04 | | 5.87 | | | 0.39 |  | | | | | -0.45 | 5.78 | | 0.938 | | | |  | 2.94 | | 6.72 | | 0.661 | | |  | | -2.59 | 5.96 | | 0.664 |  | | | | | | -4.86 | 6.60 | 0.462 |
| *Lavandula* sp. presence | 0.76 | -0.56 | | 0.64 | | | 0.384 | 0.01 | | | | | -0.07 | 0.65 | | 0.916 | | | | 0.21 | 0.33 | | 0.72 | | 0.644 | | | 0.07 | | 0.17 | 0.65 | | 0.793 | 1.19 | | | | | | -0.86 | 0.84 | 0.306 |
| Female mass | 1.12 | 0.58 | | 0.56 | | | 0.30 | 0.08 | | | | | 0.16 | 0.55 | | 0.775 | | | | 0.11 | -0.21 | | 0.63 | | 0.741 | | | 0.31 | | 0.31 | 0.57 | | 0.583 | 0.33 | | | | | | 0.36 | 0.63 | 0.564 |
| Laying date | 0.17 | -0.03 | | 0.08 | | | 0.681 | 0.35 | | | | | -0.05 | 0.08 | | 0.554 | | | | 2.80 | -0.17 | | 0.11 | | 0.11 | | | 0.08 | | -0.02 | 0.08 | | 0.774 | 0.09 | | | | | | 0.03 | 0.09 | 0.765 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | |  | | | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.03 | |  | | | | | | | 0.008 | | | | |  | | | | 0.052 | | |  | | | | | 0.009 | |  | | | | | | | 0.026 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| 1. ***Lavandula* sp. incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.62 | | 5.99 | | | 0.441 |  | | | | | -3.98 | 6.36 | | 0.531 | | | |  | 4.03 | | 6.96 | | 0.563 | | |  | | -1.08 | 6.26 | | 0.863 |  | | | | | | -6.32 | 6.91 | 0.36 |
| *Lavandula* sp. presence | 0.07 | 0.16 | | 0.60 | | | 0.794 | 3.88 | | | | | -1.19 | 0.62 | | 0.054 | | | | 0.36 | 0.41 | | 0.68 | | 0.545 | | | 0.65 | | 0.49 | 0.62 | | 0.43 | 0.55 | | | | | | -0.51 | 0.70 | 0.466 |
| Female mass | 0.81 | 0.51 | | 0.57 | | | 0.376 | 0.80 | | | | | 0.54 | 0.62 | | 0.379 | | | | 0.23 | -0.31 | | 0.66 | | 0.639 | | | 0.07 | | 0.16 | 0.61 | | 0.80 | 0.54 | | | | | | 0.49 | 0.66 | 0.462 |
| Laying date | 0.09 | -0.02 | | 0.08 | | | 0.77 | 0.34 | | | | | -0.05 | 0.08 | | 0.559 | | | | 3.14 | -0.18 | | 0.11 | | 0.091 | | | 0.10 | | -0.03 | 0.08 | | 0.749 | 0.21 | | | | | | 0.04 | 0.09 | 0.647 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | |  | | | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.02 | |  | | | | | | | 0.066 | | | | |  | | | | 0.053 | | |  | | | | | 0.017 | |  | | | | | | | 0.015 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| ***b) Lavandula* sp. nestling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.49 | | 5.8 | | | 0.439 |  | | | | | -0.80 | 5.83 | | 0.891 | | | |  | 4.98 | | 8.05 | | 0.536 | | |  | | -2.42 | 5.99 | | 0.686 |  | | | | | | -4.10 | 6.94 | 0.555 |
| *Lavandula* sp. presence | 0.95 | 0.51 | | 0.53 | | | 0.332 | 0.19 | | | | | -0.23 | 0.54 | | 0.664 | | | | 6.75 | 1.91 | | 0.85 | | **0.025** | | | 0.07 | | 0.14 | 0.53 | | 0.786 | 2.05 | | | | | | 0.90 | 0.65 | 0.169 |
| Female mass | 0.77 | 0.48 | | 0.55 | | | 0.387 | 0.13 | | | | | 0.20 | 0.55 | | 0.721 | | | | 0.45 | -0.50 | | 0.77 | | 0.515 | | | 0.27 | | 0.30 | 0.58 | | 0.609 | 0.08 | | | | | | 0.19 | 0.66 | 0.772 |
| Laying date | 0.10 | -0.03 | | 0.08 | | | 0.747 | 0.32 | | | | | -0.05 | 0.08 | | 0.572 | | | | 3.65 | -0.20 | | 0.11 | | 0.069 | | | 0.11 | | -0.03 | 0.08 | | 0.741 | 0.23 | | | | | | 0.04 | 0.09 | 0.634 |
| Observations | | |  | | | 64 | |  | | | | | | | 64 | | | | |  | | | | 64 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.033 | |  | | | | | | | 0.011 | | | | |  | | | | 0.151 | | | | |  | | | 0.009 | |  | | | | | | | 0.038 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
| 1. ***Anthriscus* sp. before incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -5.05 | | 5.82 | | | 0.39 |  | | | | | -0.45 | 5.79 | | 0.94 | | | |  | 3.23 | | 6.77 | | 0.63 | | |  | | -2.51 | 5.98 | | 0.68 |  | | | | | | -4.98 | 6.62 | 0.45 |
| *Anthriscus* sp. presence | 0.20 | -0.25 | | 0.56 | | | 0.66 | 0.28 | | | | | -0.30 | 0.57 | | 0.60 | | | | 0.67 | 0.52 | | 0.64 | | 0.41 | | | 0.27 | | 0.30 | 0.58 | | 0.61 | 0.49 | | | | | | -0.46 | 0.67 | 0.49 |
| Female mass | 1.11 | 0.57 | | 0.55 | | | 0.30 | 0.10 | | | | | 0.17 | 0.55 | | 0.75 | | | | 0.15 | -0.25 | | 0.64 | | 0.70 | | | 0.27 | | 0.30 | 0.58 | | 0.61 | 0.34 | | | | | | 0.37 | 0.63 | 0.56 |
| Laying date | 0.13 | -0.03 | | 0.08 | | | 0.72 | 0.44 | | | | | -0.05 | 0.08 | | 0.51 | | | | 2.72 | -0.17 | | 0.11 | | 0.11 | | | 0.06 | | -0.02 | 0.08 | | 0.81 | 0.11 | | | | | | 0.03 | 0.09 | 0.74 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.022 | |  | | | | | | | 0.012 | | | | |  | | | | 0.062 | | | | |  | | | 0.012 | |  | | | | | | | 0.015 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| ***c) Anthriscus* sp. incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.85 | | 5.84 | | | 0.41 |  | | | | | 0.57 | 5.93 | | 0.92 | | | |  | 3.08 | | 6.72 | | 0.65 | | |  | | -3.51 | 6.08 | | 0.56 |  | | | | | | -4.38 | 6.65 | 0.51 |
| *Anthriscus* sp. presence | 0.07 | 0.19 | | 0.72 | | | 0.79 | 2.02 | | | | | 1.12 | 0.85 | | 0.19 | | | | 0.003 | 0.05 | | 0.88 | | 0.96 | | | 0.79 | | -0.66 | 0.75 | | 0.38 | 0.74 | | | | | | 0.26 | 0.79 | 0.74 |
| Female mass | 0.97 | 0.54 | | 0.55 | | | 0.33 | 0.01 | | | | | 0.06 | 0.56 | | 0.92 | | | | 0.11 | -0.21 | | 0.63 | | 0.74 | | | 0.50 | | 0.41 | 0.58 | | 0.48 | 0.65 | | | | | | 0.28 | 0.63 | 0.65 |
| Laying date | 0.11 | -0.03 | | 0.08 | | | 0.75 | 0.61 | | | | | -0.06 | 0.08 | | 0.44 | | | | 3.04 | -0.18 | | 0.11 | | 0.10 | | | 0.04 | | -0.02 | 0.08 | | 0.84 | 0.68 | | | | | | 0.04 | 0.09 | 0.68 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | |  | | | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.02 | |  | | | | | | | 0.037 | | | | |  | | | | 0.049 | | |  | | | | | 0.02 | |  | | | | | | | 0.009 | |
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| ***c) Anthriscus* sp. nestling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.58 | | 5.83 | | | 0.43 |  | | | | | -0.79 | 5.79 | | 0.89 | | | |  | 3.73 | | 6.79 | | 0.58 | | |  | | -2.96 | 6.02 | | 0.62 |  | | | | | | -4.83 | 6.59 | 0.46 |
| *Anthriscus* sp. presence | 0.40 | 0.36 | | 0.57 | | | 0.53 | 0.13 | | | | | -0.21 | 0.56 | | 0.71 | | | | 1.15 | 0.69 | | 0.64 | | 0.28 | | | 0.33 | | -0.32 | 0.56 | | 0.57 | 0.02 | | | | | | -0.08 | 0.63 | 0.89 |
| Female mass | 0.85 | 0.5 | | 0.55 | | | 0.36 | 0.12 | | | | | 0.19 | 0.55 | | 0.73 | | | | 0.20 | -0.28 | | 0.64 | | 0.66 | | | 0.41 | | 0.37 | 0.58 | | 0.52 | 0.28 | | | | | | 0.33 | 0.63 | 0.60 |
| Laying date | 0.09 | -0.02 | | 0.08 | | | 0.77 | 0.33 | | | | | -0.05 | 0.08 | | 0.56 | | | | 3.26 | -0.18 | | 0.11 | | 0.09 | | | 0.11 | | -0.03 | 0.08 | | 0.74 | 0.21 | | | | | | 0.04 | 0.09 | 0.64 |
| Observations | | |  | | | 64 | |  | | | | | | | 64 | | | | |  | | | | 64 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.023 | |  | | | | | | | 0.01 | | | | |  | | | | 0.063 | | | | |  | | | 0.013 | |  | | | | | | | 0.007 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
| 1. ***Teucrium* sp. before incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.91 | | 5.90 | | | 0.41 |  | | | | | -0.24 | 5.86 | | 0.97 | | | |  | 3.13 | | 7.08 | | 0.66 | | |  | | -2.55 | 6.09 | | 0.68 |  | | | | | | -5.08 | 6.69 | 0.45 |
| *Teucrium* sp. presence | 2.43 | -1.32 | | 0.89 | | | 0.14 | 1.21 | | | | | -0.90 | 0.82 | | 0.28 | | | | 4.04 | 1.75 | | 0.87 | | **0.05** | | | 2.78 | | -1.41 | 0.89 | | 0.12 | 1.00 | | | | | | 0.85 | 0.83 | 0.31 |
| Female mass | 1.06 | 0.57 | | 0.56 | | | 0.31 | 0.07 | | | | | 0.15 | 0.55 | | 0.79 | | | | 0.13 | -0.24 | | 0.66 | | 0.72 | | | 0.36 | | 0.35 | 0.58 | | 0.55 | 0.27 | | | | | | 0.33 | 0.63 | 0.60 |
| Laying date | 0.16 | -0.03 | | 0.08 | | | 0.69 | 0.42 | | | | | -0.05 | 0.08 | | 0.52 | | | | 2.83 | -0.17 | | 0.11 | | 0.11 | | | 0.21 | | -0.04 | 0.08 | | 0.65 | 0.30 | | | | | | 0.05 | 0.09 | 0.59 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.056 | |  | | | | | | | 0.027 | | | | |  | | | | 0.126 | | | | |  | | | 0.051 | |  | | | | | | | 0.023 | |
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| ***d) Teucrium* sp. incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | ***Haemoproteus*** | | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -5.04 | | 5.79 | | | 0.39 |  | | | | | -0.45 | 5.79 | | 0.94 | | | |  | 3.08 | | 6.97 | | 0.66 | | |  | | -2.61 | 5.97 | | 0.66 |  | | | | | | -4.85 | 6.66 | 0.47 |
| *Teucrium* sp. presence | 0.01 | 0.11 | | 0.97 | | | 0.91 | 0.03 | | | | | -0.18 | 0.97 | | 0.85 | | | | 2.61 | 1.61 | | 1.00 | | 0.11 | | | 0.00 | | 0.04 | 0.97 | | 0.97 | 0.52 | | | | | | 0.73 | 0.98 | 0.46 |
| Female mass | 1.04 | 0.55 | | 0.55 | | | 0.32 | 0.08 | | | | | 0.16 | 0.55 | | 0.77 | | | | 0.15 | -0.25 | | 0.66 | | 0.71 | | | 0.32 | | 0.32 | 0.57 | | 0.57 | 0.24 | | | | | | 0.31 | 0.63 | 0.63 |
| Laying date | 0.07 | -0.02 | | 0.08 | | | 0.79 | 0.37 | | | | | -0.05 | 0.08 | | 0.55 | | | | 2.26 | -0.16 | | 0.11 | | 0.15 | | | 0.10 | | -0.03 | 0.08 | | 0.75 | 0.34 | | | | | | 0.05 | 0.09 | 0.56 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.019 | |  | | | | | | | 0.008 | | | | |  | | | | 0.093 | | | | |  | | | 0.008 | |  | | | | | | | 0.016 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| ***d) Teucrium* sp. nestling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | | ***Haemoproteus*** | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | | | ***Dermanyssus*** | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.90 | | 5.80 | | | 0.40 |  | | | | | -0.81 | 5.77 | | 0.89 | | | |  | 2.91 | | 6.71 | | 0.66 | | |  | | -2.47 | 6.00 | | 0.68 |  | | | | | | -4.61 | 6.58 | 0.48 |
| *Teucrium* sp. presence | 0.17 | -0.35 | | 0.87 | | | 0.69 | 0.38 | | | | | -0.54 | 0.87 | | 0.54 | | | | 0.69 | -0.45 | | 1.15 | | 0.70 | | | 0.00 | | 0.40 | 0.91 | | 0.66 | 0.11 | | | | | | 0.31 | 0.92 | 0.73 |
| Female mass | 1.03 | 0.55 | | 0.55 | | | 0.32 | 0.13 | | | | | 0.19 | 0.55 | | 0.73 | | | | 0.77 | -0.19 | | 0.63 | | 0.77 | | | 0.32 | | 0.31 | 0.58 | | 0.60 | 0.23 | | | | | | 0.30 | 0.63 | 0.63 |
| Laying date | 0.09 | -0.02 | | 0.08 | | | 0.76 | 0.35 | | | | | -0.05 | 0.08 | | 0.56 | | | | 0.08 | -0.17 | | 0.10 | | 0.10 | | | 0.10 | | -0.03 | 0.08 | | 0.75 | 0.23 | | | | | | 0.04 | 0.09 | 0.63 |
| Observations | | |  | | | 64 | |  | | | | | | | 64 | | | | |  | | | | 64 | | |  | | | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.02 | |  | | | | | | | 0.014 | | | | |  | | | | 0.053 | | |  | | | | | 0.01 | |  | | | | | | | 0.009 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| ***e) Thymus* sp. nestling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | | | ***Haemoproteus*** | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | | ***Dermanyssus*** | | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -5.11 | | 5.90 | | | 0.39 |  | | | | | -1.45 | 6.04 | | 0.81 | | | |  | 2.37 | | 6.50 | | 0.72 | | |  | | -3.05 | 6.08 | | 0.62 |  | | | | | | -4.13 | 6.90 | 0.55 |
| *Thymus* sp. presence | 0.27 | -0.28 | | 0.54 | | | 0.61 | 2.33 | | | | | -0.84 | 0.55 | | 0.13 | | | | 1.17 | -0.76 | | 0.73 | | 0.30 | | | 0.37 | | -0.33 | 0.55 | | 0.55 | 1.74 | | | | | | 0.78 | 0.59 | 0.19 |
| Female mass | 1.08 | 0.57 | | 0.56 | | | 0.31 | 0.22 | | | | | 0.27 | 0.57 | | 0.64 | | | | 0.05 | -0.13 | | 0.61 | | 0.83 | | | 0.42 | | 0.37 | 0.58 | | 0.52 | 0.13 | | | | | | 0.23 | 0.66 | 0.72 |
| Laying date | 0.06 | -0.02 | | 0.08 | | | 0.80 | 0.21 | | | | | -0.04 | 0.08 | | 0.64 | | | | 2.69 | -0.16 | | 0.10 | | 0.12 | | | 0.08 | | -0.02 | 0.08 | | 0.77 | 0.16 | | | | | | 0.04 | 0.09 | 0.69 |
| Observations | | |  | | | 64 | |  | | | | | | | 64 | | | | |  | | | | 64 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.021 | |  | | | | | | | 0.044 | | | | |  | | | | 0.065 | | | | |  | | | 0.013 | |  | | | | | | | 0.036 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
| 1. ***Lamium* sp. before incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | | | ***Haemoproteus*** | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | | ***Dermanyssus*** | | | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -4.73 | | 5.81 | | | 0.42 |  | | | | | -0.79 | 5.84 | | 0.89 | | | |  | 2.03 | | 6.80 | | 0.77 | | |  | | -1.81 | 6.12 | | 0.77 |  | | | | | | -5.50 | 6.65 | 0.41 |
| *Lamium* sp. presence | 0.22 | -0.34 | | 0.72 | | | 0.64 | 0.23 | | | | | 0.36 | 0.77 | | 0.64 | | | | 2.76 | 1.26 | | 0.75 | | 0.09 | | | 4.36 | | -1.57 | 0.80 | | **0.048** | 1.31 | | | | | | 0.89 | 0.76 | 0.25 |
| Female mass | 1.01 | 0.54 | | 0.55 | | | 0.32 | 0.10 | | | | | 0.17 | 0.55 | | 0.76 | | | | 0.08 | -0.18 | | 0.63 | | 0.78 | | | 0.33 | | 0.33 | 0.58 | | 0.57 | 0.29 | | | | | | 0.34 | 0.63 | 0.59 |
| Laying date | 0.16 | -0.03 | | 0.08 | | | 0.69 | 0.20 | | | | | -0.04 | 0.08 | | 0.65 | | | | 1.66 | -0.14 | | 0.11 | | 0.21 | | | 0.79 | | -0.08 | 0.09 | | 0.38 | 0.59 | | | | | | 0.07 | 0.10 | 0.44 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | |  | | | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.022 | |  | | | | | | | 0.011 | | | | |  | | | | 0.101 | | |  | | | | | 0.075 | |  | | | | | | | 0.03 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| ***f) Lamium* sp. incubation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | | | ***Haemoproteus*** | | | | | | | ***Leucocytozoon*** | | | | | | | | ***Protocalliphora*** | | | | | | | | | ***Dermanyssus*** | | | | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -5.06 | | 5.81 | | | 0.38 |  | | | | | -0.61 | 5.79 | | 0.92 | | | |  | 2.53 | | 6.80 | | 0.71 | | |  | | -2.26 | 6.04 | | 0.71 |  | | | | | | -4.15 | 6.61 | 0.53 |
| *Lamium* sp. presence | 0.01 | -0.07 | | 0.83 | | | 0.93 | 0.15 | | | | | -0.33 | 0.83 | | 0.70 | | | | 0.70 | -0.90 | | 1.16 | | 0.44 | | | 0.49 | | 0.61 | 0.90 | | 0.50 | 0.97 | | | | | | 0.86 | 0.85 | 0.32 |
| Female mass | 1.06 | 0.56 | | 0.55 | | | 0.31 | 0.11 | | | | | 0.18 | 0.55 | | 0.75 | | | | 0.04 | -0.13 | | 0.64 | | 0.84 | | | 0.22 | | 0.27 | 0.58 | | 0.64 | 0.13 | | | | | | 0.23 | 0.63 | 0.72 |
| Laying date | 0.09 | -0.02 | | 0.08 | | | 0.77 | 0.40 | | | | | -0.05 | 0.08 | | 0.53 | | | | 3.42 | -0.19 | | 0.11 | | 0.08 | | | 0.05 | | -0.02 | 0.08 | | 0.82 | 0.38 | | | | | | 0.06 | 0.09 | 0.54 |
| Observations | | |  | | | 65 | |  | | | | | | | 65 | | | | |  | | | | 65 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.019 | |  | | | | | | | 0.01 | | | | |  | | | | 0.058 | | | | |  | | | 0.015 | |  | | | | | | | 0.024 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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| ***f) Lamium* sp. nestling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ***Plasmodium*** | | | | | | | | | | | ***Haemoproteus*** | | | | | | | ***Leucocytozoon*** | | | | | | | ***Protocalliphora*** | | | | | | | | | ***Dermanyssus*** | | | | | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | | *std. Error* | | | *p* | *Chis SQ* | | | | | *Log-Odds* | *std. Error* | | *p* | | | | *Chis SQ* | *Log-Odds* | | *std. Error* | | *p* | | | *Chis SQ* | | *Log-Odds* | *std. Error* | | *p* | *Chis SQ* | | | | | | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -6.64 | | 6.23 | | | 0.29 |  | | | | | -1.85 | 6.07 | | 0.76 | | | |  | 2.03 | | 6.86 | | 0.77 | | |  | | -4.02 | 6.38 | | 0.53 |  | | | | | | -4.29 | 6.81 | 0.53 |
| *Lamium* sp. presence | 3.70 | 16.51 | | 1335.99 | | | 0.99 | 2.82 | | | | | 16.15 | 1377.13 | | 0.99 | | | | 1.42 | 1.52 | | 1.32 | | 0.25 | | | 3.44 | | 16.42 | 1365.41 | | 0.99 | 1.77 | | | | | | -15.57 | 1377.06 | 0.99 |
| Female mass | 1.34 | 0.66 | | 0.59 | | | 0.26 | 0.18 | | | | | 0.24 | 0.57 | | 0.67 | | | | 0.06 | -0.15 | | 0.64 | | 0.81 | | | 0.47 | | 0.41 | 0.61 | | 0.50 | 0.23 | | | | | | 0.31 | 0.65 | 0.63 |
| Laying date | 0.02 | 0.01 | | 0.08 | | | 0.89 | 0.04 | | | | | -0.02 | 0.08 | | 0.83 | | | | 1.83 | -0.14 | | 0.11 | | 0.19 | | | 0.01 | | 0.01 | 0.08 | | 0.93 | 0.04 | | | | | | 0.02 | 0.09 | 0.85 |
| Observations | | |  | | | 64 | |  | | | | | | | 64 | | | | |  | | | | 64 | | | | |  | | | 63 | |  | | | | | | | 63 | |
| R2 Tjur | | |  | | | 0.058 | |  | | | | | | | 0.036 | | | | |  | | | | 0.079 | | | | |  | | | 0.045 | |  | | | | | | | 0.023 | |
|  |  |  | |  | | |  |  | | | | |  |  | |  | | | |  |  | |  | |  | | |  | |  |  | |  |  | | | | | |  |  |  |
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**Table S4.** Final Generalized linear models (GLMs) with negative binomial distribution showing the effects of the presence of green plants per separate species (i.e., a) *Achillea* sp., b) *Lavandula* sp., c) *Anthriscus* sp., d) *Teucrium* sp., e) *Thymus* sp., f) *Lamium* sp., g) *Clinopodium* sp.) on the number of blowflies *Protocalliphora* *azurea* provided by blue tit females before the incubation, incubation and nestling period. Significant effects (P < 0.05) are marked in bold.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Achillea* sp. | | | | | | | | | | | |
|  | **before incubation** | | | | **incubation** | | | | **nestling** | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | 0.29 | 5.42 | 0.96 |  | -0.49 | 5.4 | 0.93 |  | 0.23 | 5.37 | 0.97 |
| *Achillea* sp. presence | 0.99 | -0.01 | 0.66 | 0.99 | 0.16 | -0.25 | 0.62 | 0.68 | 0.99 | -0.82 | 0.76 | 0.28 |
| Female mass | 0.85 | 0.09 | 0.52 | 0.87 | 0.09 | 0.18 | 0.52 | 0.74 | 0.03 | 0.11 | 0.51 | 0.83 |
| Laying date | 0.58 | 0.04 | 0.07 | 0.58 | 0.22 | 0.04 | 0.07 | 0.64 | 0.17 | 0.03 | 0.07 | 0.68 |
| Observations | 62 | | | | 63 | | | | 63 | | | |
| R2 Tjur | 0.045 | | | | 0.01 | | | | 0.008 | | | |
|  | *Lavandula* sp. | | | | | | | | | | | |
|  | **before incubation** | | | | **incubation** | | | | **nestling** | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -0.18 | 5.4 | 0.97 |  | 1.09 | 5.53 | 0.84 |  | 1.58 | 5.38 | 0.77 |
| *Lavandula* sp. presence | 0.81 | 0.14 | 0.59 | 0.81 | 2.76 | 0.82 | 0.53 | 0.13 | 1.43 | 0.62 | 0.48 | 0.2 |
| Female mass | 0.82 | 0.14 | 0.52 | 0.79 | 0.004 | -0.04 | 0.54 | 0.95 | 0.01 | -0.07 | 0.52 | 0.9 |
| Laying date | 0.64 | 0.03 | 0.08 | 0.65 | 0.51 | 0.05 | 0.07 | 0.5 | 0.15 | 0.03 | 0.07 | 0.72 |
| Observations | 63 | | | | 63 | | | | 63 | | | |
| R2 Tjur | 0.009 | | | | 0.017 | | | | 0.009 | | | |
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|  | | | | | | | | | | | |
| *Anthriscus* sp. | | | | | | | | | | | |
|  | **before incubation** | | | | **incubation** | | | | **nestling** | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | 0.6 | 5.39 | 0.91 |  | -0.7 | 5.47 | 0.9 |  | 0.72 | 5.41 | 0.89 |
| *Anthriscus* sp. presence | 0.18 | 0.23 | 0.52 | 0.66 | 0.02 | -0.1 | 0.68 | 0.88 | 0.3 | 0.29 | 0.51 | 0.57 |
| Female mass | 0.01 | 0.06 | 0.52 | 0.91 | 0.09 | 0.19 | 0.52 | 0.71 | 0.01 | 0.05 | 0.52 | 0.92 |
| Laying date | 0.17 | 0.03 | 0.08 | 0.69 | 0.24 | 0.04 | 0.08 | 0.64 | 0.12 | 0.03 | 0.07 | 0.73 |
| Observations | 63 | | | | 63 | | | | 63 | | | |
| R2 Tjur | 0.012 | | | | 0.02 | | | | 0.013 | | | |
|  | *Teucrium* sp. | | | | | | | | | | | |
|  | **before incubation** | | | | **incubation** | | | | **nestling** | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | -0.42 | 5.28 | 0.94 |  | -0.51 | 5.4 | 0.93 |  | -0.16 | 5.41 | 0.98 |
| *Teucrium* sp. presence | 2.2 | -1.29 | 0.77 | 0.094 | 0.04 | -0.17 | 0.88 | 0.85 | 0.04 | 0.16 | 0.8 | 0.84 |
| Female mass | 0.07 | 0.16 | 0.51 | 0.76 | 0.08 | 0.18 | 0.52 | 0.74 | 0.05 | 0.14 | 0.52 | 0.79 |
| Laying date | 0.43 | 0.05 | 0.07 | 0.51 | 0.21 | 0.03 | 0.08 | 0.65 | 0.24 | 0.04 | 0.07 | 0.63 |
| Observations | 63 | | | | 63 | | | | 63 | | | |
| R2 Tjur | 0.051 | | | | 0.008 | | | | 0.01 | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Lamium* sp. | | | | | | | | | | | |
|  | **before incubation** | | | | **incubation** | | | | **nestling** | | | |
| *Predictors* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* | *Chis SQ* | *Log-Odds* | *std. Error* | *p* |
| (Intercept) |  | 0.27 | 5.31 | 0.96 |  | -0.4 | 5.43 | 0.94 |  | 0.31 | 5.42 | 0.96 |
| *Lamium* sp. presence | 2.6 | -1.18 | 0.67 | 0.079 | 0.03 | -0.14 | 0.76 | 0.85 | 0.69 | -1.1 | 1.19 | 0.36 |
| Female mass | 0.07 | 0.13 | 0.51 | 0.79 | 0.08 | 0.17 | 0.52 | 0.75 | 0.04 | 0.11 | 0.52 | 0.83 |
| Laying date | 0.04 | 0.02 | 0.08 | 0.85 | 0.19 | 0.03 | 0.08 | 0.66 | 0.1 | 0.02 | 0.08 | 0.76 |
| Observations | 63 | | | | 63 | | | | 63 | | | |
| R2 Tjur | 0.075 | | | | 0.015 | | | | 0.045 | | | |
|  |  | | | | | | | | | | | |
| *Thymus* sp. | | | |  |  |  |  |  |  |  |  |  |
| **nestling** | | | |  |  |  |  |  |  |  |  |  |
| *Chis SQ* | *Log-Odds* | *std. Error* | *p* |  |  |  |  |  |  |  |  |  |
|  | -1.16 | 5.41 | 0.83 |  |  |  |  |  |  |  |  |  |
| 0.16 | -0.21 | 0.5 | 0.67 |  |  |  |  |  |  |  |  |  |
| 0.14 | 0.24 | 0.52 | 0.64 |  |  |  |  |  |  |  |  |  |
| 0.24 | 0.04 | 0.07 | 0.63 |  |  |  |  |  |  |  |  |  |
| 63 | | | |  |  |  |  |  |  |  |  |  |
| 0.013 | | | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |