**Supplementary material**

Table S3: Parameters related to the presence of species (analysis with GLMs taking into account imperfect detection). For each species are shown significance of variables included in the relative best AICc model. Shaded variables are those included in the best model of the same species identified by GLMMs.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Factor | *B* | χ21 | *P* | Factor | *B* | χ21 | *P* |
| a) *D. laetitiae* |  |  |  | e) *C. planospira* |  |  |  |
|  |  |  |  |  |  |  |  |
| Month |  | 73.79 | **< 0.001** | Month |  | 15.29 | 0.169 |
| Cave |  | 259.29 | **< 0.001** | Cave |  | 194.84 | **< 0.001** |
| Heterogeneity | 0.47 | 12 | **< 0.001** | Heterogeneity | -0.14 | 3.58 | 0.058 |
| Width | 0.28 | 7.95 | **0.005** | Height | 0.12 | 5.36 | **0.02** |
| Height | -0.81 | 21.41 | **< 0.001** | Temperature | 0.09 | 2.73 | 0.098 |
| Humidity | 6.64 | 2.44 | 0.118 |  |  |  |  |
| Lux | -1.26 | 43.99 | **< 0.001** | f) *Limax sp.* |  |  |  |
| Temperature | 0.26 | 20.65 | **< 0.001** |  |  |  |  |
| Temp × Month |  | 43.21 | **< 0.001** | Month |  | 42.39 | **< 0.001** |
| Hum × Month |  | 22.26 | **0.022** | Cave |  | 76.74 | **< 0.001** |
|  |  |  |  |  |  |  |  |
| b) *M. menardi* |  |  |  | g) *R. italica* |  |  |  |
|  |  |  |  |  |  |  |  |
| Month |  | 48.06 | **< 0.001** | Month |  | 26.95 | **0.005** |
| Cave |  | 309.49 | **< 0.001** | Cave |  | 147.15 | **< 0.001** |
| Width | 0.18 | 7.44 | **0.006** | Heterogeneity | -4.10 | 7.70 | **0.005** |
| Height | -0.21 | 6.95 | **0.008** | Width | 0.60 | 23.02 | **< 0.001** |
| Lux | -2.28 | 42.92 | **< 0.001** | Height | 0.29 | 13.22 | **< 0.001** |
| Temperature | -0.14 | 0.61 | 0.433 | Humidity | -5.48 | 7.44 | **0.006** |
| Temp × Month |  | 43.13 | **< 0.001** | Lux | -0.54 | 10.32 | **0.001** |
| Lux × Month |  | 33.56 | **< 0.001** |  |  |  |  |
|  |  |  |  | h) *B. bufo* |  |  |  |
| c) *M. merianae* |  |  |  |  |  |  |  |
|  |  |  |  | Month |  | 11.64 | 0.391 |
| Month |  | 15.21 | 0.173 | Cave |  | 83.151 | **< 0.001** |
| Cave |  | 147.08 | **< 0.001** | Height | 0.14 | 6.35 | **0.012** |
| Humidity | -1.71 | 3.05 | 0.081 |  |  |  |  |
| Temperature | 0.16 | 20.43 | **< 0.001** |  |  |  |  |
|  |  |  |  |  |  |  |  |
| d) *Tegenaria sp.* |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Month |  | 21.50 | **0.028** |  |  |  |  |
| Cave |  | 247.78 | < 0.001 |  |  |  |  |
| Height | -0.12 | 4.37 | **0.036** |  |  |  |  |
| Humidity | -11.70 | 37.74 | **< 0.001** |  |  |  |  |
| Lux | -1.57 | 23.33 | **< 0.001** |  |  |  |  |
| Hum × Month |  | 33.32 | **< 0.001** |  |  |  |  |
| Lux × Month |  | 35.35 | **< 0.001** |  |  |  |  |