**Supplementary Material 1: Table 1.** Preliminary analysis. Results of the mixed logistic regression model showing the effect of region, habitat, and breeding on proportion of *Versteria mustelae* positive rodents and odds ratios.

|  |  |  |  |
| --- | --- | --- | --- |
| **Fixed Effectsa,b** | **Estimate** | **SE** | **P value** |
| Intercept | -2.956 | 0.368 | <0.001\* |
| Uddevalla | -0.774 | 0.357 | 0.030\* |
| Vetlanda/Växjö | 0.837 | 0.412 | 0.042\* |
| Gnesta/Nyköping | -0.546 | 0.420 | 0.194 |
| Habitat | 1.784 | 0.346 | <0.001\* |
| Non-breeding | -1.082 | 0.209 | <0.001\* |
| Not determined | -0.820 | 0.391 | 0.036\* |
| **Contrasts** | **Odds Ratio** | **SE** | **P value** |
| Katrineholm-Uddevalla | 2.169 | 0.773 | 0.131 |
| Katrineholm-Vetlanda/Växjö | 0.433 | 0.178 | 0.177 |
| Katrineholm-Gnesta/Nyköping | 1.726 | 0.725 | 0.564 |
| Uddevalla-Vetlanda/Växjö | 0.200 | 0.086 | 0.001\* |
| Uddevalla-Gnesta/Nyköping | 0.796 | 0.345 | 0.953 |
| Vetlanda/Växjö-Gnesta/Nyköping | 3.983 | 1.899 | 0.020\* |
| Breeding-Non-breeding | 2.951 | 0.617 | <0.001\* |
| Breeding-Not determined | 2.271 | 0.887 | 0.090 |
| Non-breeding-Not determined | 0.769 | 0.307 | 0.789 |
| **Contrastsc** | **Odds Ratio** | **95% CI** |  |
| Field-Forest | 5.951 | 3.020-11.727 |  |
| Field-Mix and Forest-Mixc | 2.440 | 1.738-3.425 |  |

aNumber of observations: 1565, model deviance=812.2, model residual degrees of freedom=1557

bEstimates for categorical variables are compared to the intercepts (Katrineholm) and (Breeding)

c Odds calculated separately for “habitat” due to the numerical construction of this variable (see also text). For this reason, the odds ratio for field-mix and forest-mix are also the same.

(\*) indicates significant value (p<0.05)

**Supplementary Material 1: Table 2.** Preliminary analysis. Results of the mixed logistic regression model showing the effect of region, habitat, and breeding on proportion of *Hydatigera taeniaeformis* positive rodents and odds ratios.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fixed Effectsa,b** | | **Estimate** | **SE** | **P value** |
| Intercept | | -6.574 | 0.864 | <0.001\* |
| Uddevalla | | 1.227 | 0.667 | 0.056 |
| Vetlanda/Växjö | | 0.277 | 1.030 | 0.788 |
| Gnesta/Nyköping | | 1.655 | 0.804 | 0.039\* |
| Habitat | | 3.498 | 0.701 | <0.001\* |
| Non-breeding | | -0.629 | 0.306 | 0.040 |
| Not determined | | -0.035 | 0.482 | 0.942 |
| **Contrasts** | **Odds Ratio** | | **SE** | **P value** |
| Katrineholm-Uddevalla | 0.279 | | 0.186 | 0.222 |
| Katrineholm-Vetlanda/Växjö | 0.758 | | 0.781 | 0.993 |
| Katrineholm-Gnesta/Nyköping | 0.191 | | 0.154 | 0.166 |
| Uddevalla-Vetlanda/Växjö | 2.720 | | 2.589 | 0.719 |
| Uddevalla-Gnesta/Nyköping | 0.685 | | 0.473 | 0.947 |
| Vetlanda/Växjö-Gnesta/Nyköping | 0.252 | | 0.259 | 0.536 |
| Breeding-Non-breeding | 1.875 | | 0.573 | 0.099 |
| Breeding-Not determined | 1.036 | | 0.499 | 0.997 |
| Non-breeding-Not determined | 0.552 | | 0.273 | 0.453 |
| **Contrastsc** | **Odds Ratio** | | **95% CI** |  |
| Field-Forest | 33.043 | | 8.360-130.603 |  |
| Field-Mix and Forest-Mixc | 5.748 | | 2.891-11.429 |  |

aNumber of observations: 1565, model deviance=460.7, model residual degrees of freedom=1557

bEstimates for categorical variables are compared to the intercepts (Katrineholm) and (Breeding)

c Odds calculated separately for “habitat” due to the numerical construction of this variable (see also text). For this reason, the odds ratio for field-mix and forest-mix are also the same.

(\*) indicates significant value (p<0.05)