Table 1: Assess how much variance is explained by transect

Urbanization = Distance to the City Center

Model: Labidomera\_clivicollis ~ Block + (1 | Population) + (1 | Population:Fam\_uniq) + Transect\_ID + City\_dist + Transect\_ID:City\_dist

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Family | 0.561 | 12.826 | 6.362 | 1 | **0.006** |
| Labidomera clivicollis: 2020 | Population | 1.572 | 26.426 | -0.041 | 1 | 0.5 |

Table 2: Quantify variance explained by transect

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Block | 6.942 | 0.074 |
| Subtransect | 0.587 | 0.443 |
| Distance to City Center | 6.499 | **0.011\*** |
| Subtransect x Distance to City Center | 0.867 | 0.352 |

Table 3: Assess how much variance is explained by transect

Urbanization = Urbanization Score

Model: Labidomera\_clivicollis ~ Block + (1 | Population) + (1 | Population:Fam\_uniq) + Transect\_ID + Urb\_score + Transect\_ID:Urb\_score

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Family | 1.228 | 24.366 | 8.272 | 1 | **0.002** |
| Labidomera clivicollis: 2020 | Population | 2.478 | 36.149 | -0.010 | 1 | 0.5 |

Table 4: Quantify variance explained by transect

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Block | 2,370,958.576 | **<0.001\*\*\*** |
| Subtransect | 2,302,036.670 | **<0.001\*\*\*** |
| Urbanization Score | 205,478.717 | **<0.001\*\*\*** |
| Subtransect x Urbanization Score | 2.196 | 0.138 |