Table 1: Test for variance among families and populations

Model: Labidomera\_clivicollis ~ Block + (1 | Population) + (1 | Population:Fam\_uniq)

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Family | 1.108 | 24.241 | 8.076 | 1 | **0.002** |
| Labidomera clivicollis: 2020 | Population | 1.702 | 30.790 | 0.015 | 1 | 0.4515 |

Table 2: Assess how much variance is explained by urbanization

Urbanization = Distance to the City Center

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

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Family | 1.114 | 24.340 | 7.879 | 1 | **0.0025** |
| Labidomera clivicollis: 2020 | Population | 1.706 | 30.835 | 0.024 | 1 | 0.4385 |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Block | 6.168 | 0.104 |
| Distance to City Center | 0.207 | 0.649 |

Table 4: Assess how much variance is explained by urbanization

Urbanization = Urbanization Score

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

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Family | 1.107 | 24.225 | 8.060 | 1 | **0.0025** |
| Labidomera clivicollis: 2020 | Population | 1.695 | 30.700 | -0.091 | 1 | 0.5 |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Labidomera clivicollis: 2020 | Block | 123,733.397 | **<0.001\*\*\*** |
| Urbanization Score | 100.826 | **<0.001\*\*\*** |