Table 1: Test for variance among families and populations

Model: Herbivory\_mean\_late\_binary ~ Block + (1 | Population) + (1 | Population:Fam\_uniq)

| Variable | Group | Variance | PVE | Ï‡2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Herbivory after flowering, binary: 2021 | Family | NA | NA | 7.092 | 1 | **0.004** |
| Population | 27.961 | 89.473 | 0.000 | 1 | 0.4955 |

Table 2: Assess how much variance is explained by urbanization

Urbanization = Distance to the City Center

Model: Herbivory\_mean\_late\_binary ~ Block + (1 | Population) + (1 | Population:Fam\_uniq) + City\_dist

| Variable | Group | Variance | PVE | Ï‡2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Herbivory after flowering, binary: 2021 | Family | NA | NA | 5.815 | 1 | **0.008** |
| Population | 25.169 | 88.44 | 0.000 | 1 | 0.4945 |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Herbivory after flowering, binary: 2021 | Block | 1,476,410.555 | **<0.001\*\*\*** |
| Distance to City Center | 44.434 | **<0.001\*\*\*** |

Table 4: Assess how much variance is explained by urbanization

Urbanization = Urbanization Score

Model: Herbivory\_mean\_late\_binary ~ Block + (1 | Population) + (1 | Population:Fam\_uniq) + Urb\_score

| Variable | Group | Variance | PVE | Ï‡2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Herbivory after flowering, binary: 2021 | Family | NA | NA | 5.699 | 1 | **0.0085** |
| Population | 25.457 | 88.556 | 0.001 | 1 | 0.4865 |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Herbivory after flowering, binary: 2021 | Block | 1,499,049.199 | **<0.001\*\*\*** |
| Urbanization Score | 2,942.709 | **<0.001\*\*\*** |