# Urbanization = Distance to City Center

ANOVA with all years of data

Model: Monarch\_Quantity\_Observed ~ Block + (1 | Population/Family) + Year + Sample + City\_dist + Transect\_ID + City\_dist:Transect\_ID

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Danaus plexippus abundance | Block | 3.938 | 0.268 |
| Year | 0.009 | 0.927 |
| Sample | 170.923 | **<0.001\*\*\*** |
| Distance to City Center | 5.208 | **0.022\*** |
| Subtransect | 0.021 | 0.885 |
| Distance to City Center x Subtransect | 0.319 | 0.572 |

ANOVA with one year of data

Model: Monarch\_Quantity\_Observed ~ Block + (1 | Population/Family) + Sample + City\_dist + Transect\_ID + City\_dist:Transect\_ID

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Danaus plexippus abundance | Block | 16.874 | **<0.001\*\*\*** |
| Sample | 203.976 | **<0.001\*\*\*** |
| Distance to City Center | 4.366 | **0.037\*** |
| Subtransect | 0.088 | 0.767 |
| Distance to City Center x Subtransect | 1.404 | 0.236 |

# Urbanization = Urbanization Score

ANOVA with all years of data

Model: Monarch\_Quantity\_Observed ~ Block + (1 | Population/Family) + Year + Sample + Urb\_score + Transect\_ID + Urb\_score:Transect\_ID

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Danaus plexippus abundance | Block | 4.025 | 0.259 |
| Year | 0.015 | 0.903 |
| Sample | 170.722 | **<0.001\*\*\*** |
| Urbanization Score | 0.637 | 0.425 |
| Subtransect | 0.005 | 0.945 |
| Urbanization Score x Subtransect | 1.207 | 0.272 |

ANOVA with one year of data

Model: Monarch\_Quantity\_Observed ~ Block + (1 | Population/Family) + Sample + Urb\_score + Transect\_ID + Urb\_score:Transect\_ID

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Danaus plexippus abundance | Block | 16.657 | **<0.001\*\*\*** |
| Sample | 204.153 | **<0.001\*\*\*** |
| Urbanization Score | 0.131 | 0.717 |
| Subtransect | 0.001 | 0.969 |
| Urbanization Score x Subtransect | 1.654 | 0.198 |