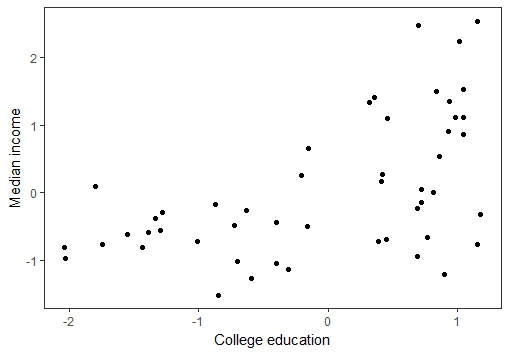
Supplementary Material

# Supplementary Figures

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Description automatically generated­

**Supplementary Figure 1**. Mean percent impervious surface cover within 100 m of 53 Neighborhood Nestwatch sites in the Washington, DC region.



**Supplementary Figure 2**. Association of median household income and percent attainment of a bachelor’s or associate degree among census tracts encompassing 53 sites in the Washington, DC region. Values are scaled.

# Supplementary Tables

Table S1. Variables examined for relationships with cat abundance (λ), detection (*p*), and availability for detection (ϕ) in the Washington, DC region, 2016.

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Description | Parameter | Method |
| imp | Percent impervious surface cover in 100 m radius of site | λ | Both |
| imp2 | Impervious surface cover, squared | λ | Both |
| density | Human population density within site’s census tract | λ | Both |
| density2 | Human population density, squared | λ | Both |
| income | Median income in census tract | λ | Both |
| edu | Percent individuals in census tract with college degree | λ | Both |
| time | Time of day transect survey, in minutes after midnight | ϕ, *p* | Transect |
| time2 | Time of day, squared | ϕ, *p* | Transect |
| temp | Temperature at the time of the transect | *p* | Transect |
| dew | Dew point at the time of the transect | *p* | Transect |
| doy | Day of the year | *p* | Both |
| tempHigh | Daily high temperature | *p* | Camera |
| tempLow | Daily low temperature | *p* | Camera |
| dewHigh | Daily low dew point | *p* | Camera |

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Table S2. Summary statistics of the candidate models examining cat detection and availability for detection in the Washington, DC region, 2016. Models are ranked by Akaike Information Criterion, AICc. ϕ represents availability for detection, *p* represents detection, and λ represents abundance. Models up to a cumulative weight of 0.75 are shown.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model set | Formula | Ka | AICc | ΔAICc | *w*b | LLc |
| Transect |  | | | | | |
|  |  | 6 | 459.95 | 0 | 0.23 | -223.06 |
|  |  | 7 | 460.15 | 0.20 | 0.21 | -221.83 |
|  |  | 8 | 462.10 | 2.16 | 0.08 | -221.41 |
|  |  | 7 | 462.28 | 2.33 | 0.07 | -222.90 |
|  |  | 7 | 462.38 | 2.44 | 0.07 | -222.95 |
|  |  | 7 | 462.58 | 2.63 | 0.06 | -223.05 |
| Camera |  | | | | | |
|  |  | 4 | 673.78 | 0 | 0.41 | -332.43 |
|  |  | 5 | 675.34 | 1.56 | 0.19 | -331.96 |
|  |  | 5 | 676.19 | 2.41 | 0.12 | -332.38 |

a Number of parameters estimated

b AICc weight

c Log-likelihood

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