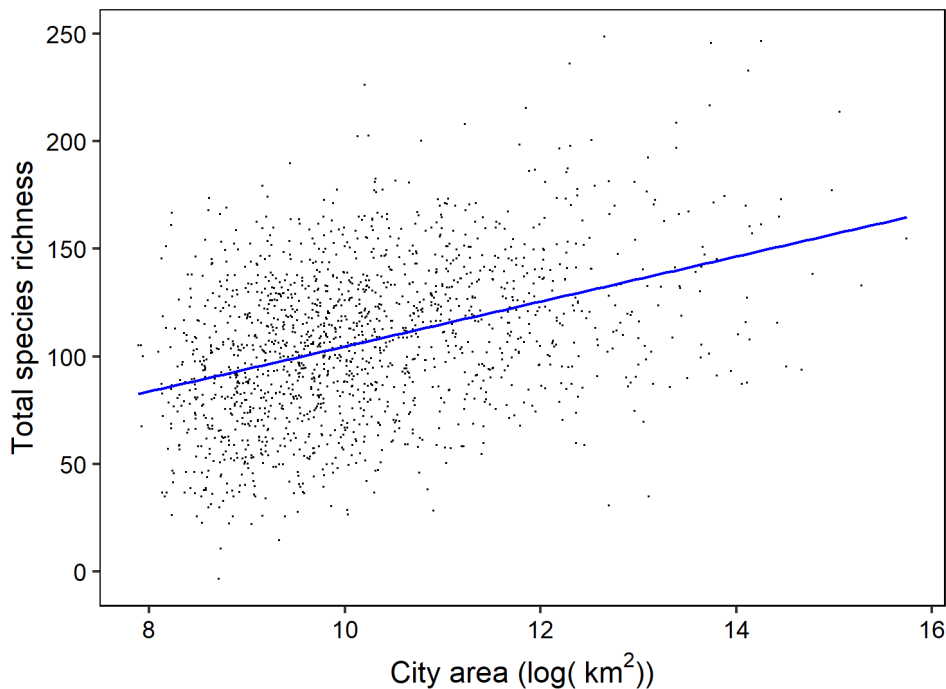**Appendix 6**. Results of a Generalized Additive Model, demonstrating the relationship between city size and species richness.

Figure A1. Adjusted species richness after accounting for the total number of eBird lists in a city, as a result of a Generalized Additive Model. The plot was made using the mgcViz package in R.

Table A1. Model results from Generalized Additive Model, where the number of lists was included as a smooth term.

```
Family: gaussian
Link function: identity

Formula:
total_richness ~ log(ALAND10/1000) + s(total_lists)

Parametric coefficients:
                   Estimate Std. Error t value Pr(>|t|)
(Intercept)          63.003      9.766   6.451 1.47e-10 ***
log(ALAND10/1000)    10.461      0.953  10.977  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Approximate significance of smooth terms:
                 edf Ref.df     F p-value
s(total_lists) 8.967      9 150.8  <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

R-sq.(adj) =  0.741   Deviance explained = 74.3%
GCV = 1123.9  Scale est. = 1116.1     n = 1581
```