Scales of effect for urban mammals vary among species and environmental attributes  
**Landscape Ecology**  
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**Table S1**. Model parameters for the top model describing fox squirrel occupancy.

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| --- | --- | --- | --- | --- |
| **Fox Squirrel Occupancy:** | |  |  |  |
|  | Estimate | SE | z | P(>|z|) |
| (Intercept) | -1.626 | 1.291 | -1.2594 | 0.208 |
| SeasonOC17 | 0.986 | 1.353 | 0.7288 | 0.466 |
| SeasonJA18 | 1.545 | 1.356 | 1.1389 | 0.255 |
| SeasonAP18 | 2.023 | 1.366 | 1.4814 | 0.138 |
| SeasonJU18 | 0.016 | 1.387 | 0.0115 | 0.991 |
| SeasonOC18 | 2.215 | 1.365 | 1.623 | 0.105 |
| SeasonJA19 | 1.381 | 1.367 | 1.01 | 0.312 |
| SeasonAP19 | 1.17 | 1.359 | 0.8611 | 0.389 |
| SeasonJU19 | 1.848 | 1.78 | 1.0383 | 0.299 |
| SeasonOC19 | 1.717 | 1.355 | 1.2668 | 0.205 |
| SeasonJA20 | 1.473 | 1.374 | 1.0724 | 0.284 |
| SeasonAP20 | 1.734 | 1.391 | 1.2467 | 0.213 |
| water.50 | 0.319 | 0.145 | 2.1934 | 0.028 |
| forest.239 | 1.034 | 0.207 | 4.9937 | 0.000 |
| impervious.100 | -1.912 | 0.316 | -6.0443 | 0.000 |
|  |  |  |  |  |
| Detection: |  |  |  |  |
|  | Estimate | SE | z | P(>|z|) |
| (Intercept) | 1.04044 | 0.267 | 3.90199 | 0.000 |
| sqrl.seasonAP19 | -0.66402 | 0.38 | -1.74926 | 0.080 |
| sqrl.seasonAP20 | -0.81484 | 0.357 | -2.28028 | 0.023 |
| sqrl.seasonJA18 | -0.38845 | 0.364 | -1.06855 | 0.285 |
| sqrl.seasonJA19 | -0.77294 | 0.375 | -2.06028 | 0.039 |
| sqrl.seasonJA20 | -1.38498 | 0.353 | -3.92555 | 0.000 |
| sqrl.seasonJU17 | -3.15361 | 0.787 | -4.00905 | 0.000 |
| sqrl.seasonJU18 | -1.26059 | 0.456 | -2.7656 | 0.006 |
| sqrl.seasonJU19 | -3.32401 | 0.549 | -6.05277 | 0.000 |
| sqrl.seasonOC17 | 0.00127 | 0.393 | 0.00323 | 0.997 |
| sqrl.seasonOC18 | 0.2594 | 0.389 | 0.66747 | 0.504 |
| sqrl.seasonOC19 | -0.15471 | 0.371 | -0.41735 | 0.676 |

**Table S2**. Model parameters for the top model describing opossum occupancy

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Virginia Opossum Occupancy:** | |  |  |  |
|  | Estimate | SE | z | P(>|z|) |
| (Intercept) | -0.199 | 0.458 | -0.434 | 0.664 |
| SeasonOC17 | 2.184 | 0.605 | 3.607 | 0.000 |
| SeasonJA18 | 1.518 | 0.616 | 2.467 | 0.014 |
| SeasonAP18 | 2.747 | 0.819 | 3.355 | 0.001 |
| SeasonJU18 | 2.151 | 0.607 | 3.546 | 0.000 |
| SeasonOC18 | 4.113 | 1.146 | 3.59 | 0.000 |
| SeasonAP19 | 2.155 | 0.615 | 3.506 | 0.000 |
| SeasonJU19 | 1.7 | 0.567 | 2.999 | 0.003 |
| SeasonOC19 | 2.661 | 0.671 | 3.967 | 0.000 |
| SeasonJA20 | 0.324 | 0.869 | 0.372 | 0.710 |
| SeasonAP20 | 1.219 | 0.589 | 2.07 | 0.038 |
| water.500 | 0.959 | 1.018 | 0.942 | 0.346 |
| forest.1000 | -0.314 | 0.144 | -2.171 | 0.030 |
| impervious.100 | 0.362 | 0.163 | 2.213 | 0.027 |
|  |  |  |  |  |
|  |  |  |  |  |
| Detection: |  |  |  |  |
|  | Estimate | SE | z | P(>|z|) |
| (Intercept) | -0.0664 | 0.158 | -0.42 | 0.674 |
| opos.seasonAP19 | 0.4809 | 0.222 | 2.168 | 0.030 |
| opos.seasonAP20 | 0.2425 | 0.237 | 1.023 | 0.306 |
| opos.seasonJA18 | -0.4208 | 0.234 | -1.802 | 0.072 |
| opos.seasonJA20 | -0.8755 | 0.492 | -1.781 | 0.075 |
| opos.seasonJU17 | -0.119 | 0.278 | -0.428 | 0.668 |
| opos.seasonJU18 | 0.6135 | 0.222 | 2.759 | 0.006 |
| opos.seasonJU19 | 0.3042 | 0.232 | 1.309 | 0.191 |
| opos.seasonOC17 | 0.4416 | 0.219 | 2.016 | 0.044 |
| opos.seasonOC18 | 0.7022 | 0.219 | 3.211 | 0.001 |
| opos.seasonOC19 | 1.0854 | 0.234 | 4.631 | 0.000 |

**Table S3**. Model parameters for the top model describing red fox occupancy.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Red Fox Occupancy:** |  |  |  |  |
|  | Estimate | SE | z | P(>|z|) |
| (Intercept) | -1.423 | 0.418 | -3.4 | 0.001 |
| SeasonOC17 | 1.331 | 0.548 | 2.43 | 0.015 |
| SeasonJA18 | 1.791 | 0.553 | 3.24 | 0.001 |
| SeasonAP18 | 0.928 | 0.545 | 1.7 | 0.088 |
| SeasonJU18 | 0.79 | 0.558 | 1.41 | 0.157 |
| SeasonOC18 | 1.624 | 0.559 | 2.91 | 0.004 |
| SeasonJA19 | 1.724 | 0.587 | 2.93 | 0.003 |
| SeasonAP19 | 1.75 | 0.588 | 2.98 | 0.003 |
| SeasonJU19 | 1.449 | 0.601 | 2.41 | 0.016 |
| SeasonOC19 | 1.896 | 0.554 | 3.42 | 0.001 |
| SeasonJA20 | 1.205 | 0.547 | 2.2 | 0.028 |
| SeasonAP20 | 1.046 | 0.569 | 1.84 | 0.066 |
| water.100 | 0.403 | 0.112 | 3.59 | 0.000 |
| forest.863 | 0.549 | 0.116 | 4.73 | 0.000 |
| impervious.1339 | 0.391 | 0.113 | 3.45 | 0.001 |
|  |  |  |  |  |
| Detection: |  |  |  |  |
|  | Estimate | SE | z | P(>|z|) |
| (Intercept) | 0.0854 | 0.229 | 0.372 | 0.710 |
| redfox.seasonAP19 | -0.7917 | 0.319 | -2.479 | 0.013 |
| redfox.seasonAP20 | -0.1786 | 0.33 | -0.541 | 0.588 |
| redfox.seasonJA18 | -0.4124 | 0.293 | -1.409 | 0.159 |
| redfox.seasonJA19 | -0.5784 | 0.321 | -1.804 | 0.071 |
| redfox.seasonJA20 | -0.1257 | 0.317 | -0.396 | 0.692 |
| redfox.seasonJU17 | -0.1799 | 0.396 | -0.454 | 0.650 |
| redfox.seasonJU18 | -0.3392 | 0.337 | -1.007 | 0.314 |
| redfox.seasonJU19 | -0.7252 | 0.358 | -2.028 | 0.043 |
| redfox.seasonOC17 | -0.3683 | 0.313 | -1.177 | 0.239 |
| redfox.seasonOC18 | -0.1208 | 0.307 | -0.394 | 0.694 |
| redfox.seasonOC19 | 0.0714 | 0.304 | 0.235 | 0.814 |