Appendix 1. Summary of the results of hypothesis testing looking at temporal and individual variation in habitat selection by 14 coyotes with GPS collars in the Greater Toronto Area from 2012-2017. We did hypotheses testing by determining the model with the lowest delta AIC where all interaction terms had *p*-values < 0.05. *p*-values marked with \* have statistical support. Bold indicates the model with the strongest support. The Full Model includes all interaction terms that had statistical support.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Model*** | ***ΔAIC*** | ***Model Terms*** | ***β +/- SE*** | ***P-values*** |
| *H1: Time of Day* |  |  |  |  |
| **Time x every habitat** | **0** | **Natural Cover**  **Open Paved**  **Housing**  **Day x Natural Cover**  **Day x Open Paved**  **Day x Housing** | **1.50 +/- 0.15**  **0.81 +/- 0.15**  **-0.22 +/- 0.28**  **0.07 +/- 0.02**  **-0.49 +/- 0.13**  **-0.75 +/- 0.21** | **<0.001 \***  **<0.001 \***  **0.429**  **0.003 \***  **<0.001 \***  **<0.001 \*** |
| Time x Housing | 111 | Natural Cover  Open Paved  Housing  Day x Housing | 1.54 +/- 0.15  0.64 +/- 0.16  -0.22 +/- 0.28  -0.75 +/- 0.21 | <0.001 \*  <0.001 \*  0.438  <0.001 \* |
| Time x Open Paved | 113 | Natural Cover  Open Paved  Housing  Day x Open Paved | 1.54 +/- 0.15  0.82 +/- 0.15  -0.50 +/- 0.31  -0.50 +/- 0.13 | <0.001 \*  <0.001 \*  0.104  <0.001 \* |
| Time x Natural Cover | 190 | Natural Cover  Open Paved  Housing  Day x Natural Cover | 1.51 +/- 0.15  0.64 +/- 0.16  -0.50 +/- 0.31  0.08 +/- 0.02 | <0.001 \*  <0.001 \*  0.109  0.003 \* |
| Habitat Only | 398 | Natural Cover  Open Paved  Housing | 1.55 +/- 0.15  0.64 +/- 0.16  -0.50 +/- 0.31 | <0.001 \*  <0.001 \*  0.108 |
| Null Model | 8,310 |  |  |  |
| *H2: Time of Year* |  |  |  |  |
| Season x every habitat | 0 | Natural Cover  Open Paved  Housing  Breeding x Natural Cover  Pup Rearing x Natural Cover  Breeding x Open Paved  Pup Rearing x Open Paved  Breeding x Housing  Pup Rearing x Housing | 1.53 +/- 0.15  0.60 +/- 0.17  -0.94 +/- 0.24  0.04 +/- 0.02  0.02 +/- 0.02  0.11 +/- 0.13  -0.09 +/- 0.12  0.57 +/- 0.24  0.47 +/- 0.20 | <0.001 \*  <0.001 \*  <0.001 \*  0.055  0.446  0.397  0.467  0.017 \*  0.022 \* |
| **Season x Housing** | **72** | **Natural Cover**  **Open Paved**  **Housing**  **Breeding x Housing**  **Pup Rearing x Housing** | **1.54 +/- 0.15**  **0.64 +/- 0.16**  **-0.95 +/- 0.24**  **0.57 +/- 0.24**  **0.46 +/- 0.20** | **<0.001 \***  **<0.001 \***  **<0.001 \***  **0.017 \***  **0.023 \*** |
| Habitat Only | 242 | Natural Cover  Open Paved  Housing | 1.55 +/- 0.15  0.64 +/- 0.16  -0.50 +/- 0.31 | <0.001 \*  <0.001 \*  0.108 |
| Season x Natural Cover | 245 | Natural Cover  Open Paved  Housing  Breeding x Natural Cover  Pup Rearing x Natural Cover | 1.53 +/- 0.15  0.64 +/- 0.16  -0.50 +/- 0.31  0.04 +/- 0.03  0.01 +/- 0.02 | <0.001 \*  <0.001 \*  0.107  0.145  0.789 |
| Season x Open Paved | 261 | Natural Cover  Open Paved  Housing  Breeding x Open Paved  Pup Rearing x Open Paved | 1.56 +/- 0.15  0.61 +/- 017  -0.49 +/- 0.31  0.10 +/- 0.13  -0.10 +/- 0.12 | <0.001 \*  <0.001 \*  0.116  0.425  0.418 |
| Null Model | 8,344 |  |  |  |
| H3: Social Status |  |  |  |  |
| Status x every habitat | 0 | Natural Cover  Open Paved  Housing  Resident x Natural Cover  Resident x Open Paved  Resident x Housing | 1.60 +/- 0.15  0.40 +/- 0.17  0.39 +/- 0.25  -0.08 +/- 0.07  0.29 +/- 0.23  -1.35 +/- 0.32 | <0.001 \*  0.018 \*  0.116  0.234  0.207  <0.001 \* |
| **Status x Housing** | **53** | **Natural Cover**  **Open Paved**  **Housing**  **Resident x Housing** | **1.54 +/- 0.15**  **0.64 +/- 0.16**  **0.39 +/- 0.25**  **-1.35 +/- 0.31** | **<0.001 \***  **<0.001 \***  **0.123**  **<0.001 \*** |
| Status x Open Paved | 110 | Natural Cover  Open Paved  Housing  Resident x Open Paved | 1.54 +/- 0.14  0.39 +/- 0.17  -0.50 +/- 0.31  0.30 +/- 0.23 | <0.001 \*  0.025 \*  0.102  0.189 |
| Status x Natural Cover | 152 | Natural Cover  Open Paved  Housing  Resident x Natural Cover | 1.61 +/- 0.16  0.64 +/- 0.16  -0.49 +/- 0.31  -0.08 +/- 0.07 | <0.001 \*  <0.001 \*  0.111  0.238 |
| Habitat Only | 158 | Natural Cover  Open Paved  Housing | 1.55 +/- 0.15  0.64 +/- 0.16  -0.50 +/- 0.31 | <0.001 \*  <0.001 \*  0.108 |
| Null Model | 8,260 |  |  |  |
| H4: Age |  |  |  |  |
| **Habitat Only** | **0** | **Natural Cover**  **Open Paved**  **Housing** | **1.55 +/- 0.15**  **0.64 +/- 0.16**  **-0.50 +/- 0.31** | **<0.001 \***  **<0.001 \***  **0.108** |
| Age x Housing | 0 | Natural Cover  Open Paved  Housing  Adult x Housing | 1.53 +/- 0.15  0.63 +/- 0.16  -0.22 +/- 0.26  -0.42 +/- 0.50 | <0.001 \*  <0.001 \*  0.397  0.396 |
| Age x Open Paved | 0 | Natural Cover  Open Paved  Housing  Adult x Open Paved | 1.54 +/- 0.15  0.32 +/- 0.17  -0.50 +/- 0.31  0.45 +/- 0.26 | <0.001 \*  0.057  0.105  0.082 |
| Age x every habitat | 1 | Natural Cover  Open Paved  Housing  Adult x Natural Cover  Adult x Open Paved  Adult x Housing | 1.51 +/- 9,16  0.27 +/- 0.15  -0.27 +/- 0.22  0.02 +/- 0.25  0.49 +/- 0.25  -0.35 +/- 0.48 | <0.001 \*  0.076  0.229  0.926  0.051  0.465 |
| Age x Natural Cover | 3 | Natural Cover  Open Paved  Housing  Adult x Natural Cover | 1.58 +/- 0.19  0.63 +/- 0.16  -0.50 +/- 0.30  -0.05 +/- 0.27 | <0.001 \*  <0.001 \*  0.104  0.851 |
| Null Model | 8,102 |  |  |  |
| H5: Sex |  |  |  |  |
| **Habitat Only** | **0** | **Natural Cover**  **Open Paved**  **Housing** | **1.55 +/- 0.15**  **0.64 +/- 0.16**  **-0.50 +/- 0.31** | **<0.001 \***  **<0.001 \***  **0.108** |
| Sex x Housing | 2 | Natural Cover  Open Paved  Housing  Male x Open Paved | 1.54 +/- 0.15  0.64 +/- 0.16  -0.74 +/- 0.33  0.48 +/- 0.61 | <0.001 \*  <0.001 \*  0.025 \*  0.439 |
| Sex x Open Paved | 3 | Natural Cover  Open Paved  Housing  Male x Open Paved | 1.54 +/- 0.15  0.72 +/- 0.22  -0.50 +/- 0.31  -0.17 +/- 0.31 | <0.001 \*  0.001 \*  0.106  0.590 |
| Sex x Natural Cover | 3 | Natural Cover  Open Paved  Housing  Male x Natural Cover | 1.48 +/- 0.19  0.64 +/- 0.16  -0.50 +/- 0.31  0.12 +/- 0.29 | <0.001 \*  <0.001 \*  0.108  0.674 |
| Sex x every habitat | 9 | Natural Cover  Open Paved  Housing  Male x Natural Cover  Male x Open Paved  Male x Housing | 1.47 +/- 0.19  0.70 +/- 0.22  -0.75 +/- 0.33  0.13 +/- 0.29  -0.13 +/- 0.31  0.48 +/- 0.62 | <0.001 \*  0.001 \*  0.023 \*  0.650  0.669  0.432 |
| Null Model | 8,102 |  |  |  |
| Full Model |  |  |  |  |
| **Full Model** | **0** | **Natural Cover**  **Open Paved**  **Housing**  **Day x Natural Cover**  **Day x Open Paved**  **Day x Housing**  **Breeding x Housing**  **Pup Rearing x Housing**  **Resident x Housing** | **1.50 +/- 0.14**  **0.82 +/- 0.15**  **0.13 +/- 0.19**  **0.07 +/- 0.02**  **-0.49 +/- 0.13**  **-0.79 +/- 0.21**  **0.64 +/- 0.20**  **0.47 +/- 0.13**  **-1.21 +/- 0.28** | **<0.001 \***  **<0.001 \***  **0.480**  **<0.001 \***  **<0.001 \***  **<0.001 \***  **0.002 \***  **<0.001 \***  **<0.001 \*** |
| Time and Season | 64 | Natural Cover  Open Paved  Housing  Day x Natural Cover  Day x Open Paved  Day x Housing  Breeding x Housing  Pup Rearing x Housing | 1.50 +/- 0.14  0.81 +/- 0.15  -0.67 +/- 0.20  0.07 +/- 0.02  -0.49 +/- 0.12  -0.79 +/- 0.21  0.55 +/- 0.25  0.51 +/- 0.20 | <0.001 \*  <0.001 \*  0.001 \*  <0.001 \*  <0.001 \*  <0.001 \*  0.024 \*  0.010 \* |
|  |  |  |  |  |
| Time and Status | 128 | Natural Cover  Open Paved  Housing  Day x Natural Cover  Day x Open Paved  Day x Housing  Resident x Housing | 1.49 +/- 0.14  0.81 +/- 0.15  0.64 +/- 0.23  0.07 +/- 0.12  -0.49 +/- 0.13  -0.77 +/- 0.21  -1.31 +/- 0.27 | <0.001 \*  <0.001 \*  0.005 \*  <0.001 \*  <0.001 \*  <0.001 \*  <0.001 \* |
| Time | 237 | Natural Cover  Open Paved  Housing  Day x Natural Cover  Day x Open Paved  Day x Housing | 1.50 +/- 0.15  0.81 +/- 0.15  -0.22 +/- 0.28  0.07 +/- 0.02  -0.49 +/- 0.13  -0.75 +/- 0.21 | <0.001 \*  <0.001 \*  0.429  0.003 \*  <0.001 \*  <0.001 \* |
| Season | 275 | Natural Cover  Open Paved  Housing  Breeding x Housing  Pup Rearing x Housing | 1.54 +/- 0.15  0.64 +/- 0.16  -0.95 +/- 0.24  0.57 +/- 0.24  0.46 +/- 0.20 | <0.001 \*  <0.001 \*  <0.001 \*  0.017 \*  0.023 \* |
| Status | 339 | Natural Cover  Open Paved  Housing  Resident x Housing | 1.54 +/- 0.15  0.64 +/- 0.16  0.39 +/- 0.25  -1.35 +/- 0.31 | <0.001 \*  <0.001 \*  0.123  <0.001 \* |
| Season and Status | 361 | Natural Cover  Open Paved  Housing  Breeding x Housing  Pup Rearing x Housing  Resident x Housing | 1.55 +/- 0.15  0.64 +/- 0.16  -0.07 +/- 0.20  0.64 +/- 0.20  0.42 +/- 0.13  -1.30 +/- 0.31 | <0.001 \*  <0.001 \*  0.745  0.002 \*  <0.001 \*  <0.001 \* |