Supplemental Table S5

Candidate models describing daily nest survival rate (DSR) of five forest dwelling passerines on Navarino Island, Chile, 2014-2017. In the first stage of model selection, we evaluated temporal parameters. On the second stage, we added habitat parameters to the best-supported model from stage one. On the first stage we tested for nest stage (egg [laying and incubation] vs nestling), day of year (date, linear and quadratic effects), and nest age (linear and quadratic effects). On the second stage, the parameters we tested for included nest coverage (concealment, computed as the mean side [measured at the four cardinal directions] and overhead cover), canopy cover, canopy height, understory cover, understory height, nest height, and ground predator accessibility index (predator index, ranging from 0-2, indicating increasing nest accessibility for a potential ground predator). Models are ranked by AICc, with the best supported model given in bold (i.e., the model with lowest AICc). For each stage of model selection, we present the first 10 candidate models only.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Elaenia albiceps* |  |  |  |  |  |
| **Model.** All models include season as random effect | **K** | **LL** | **AICc** | **ΔAICc** | **Weight** |
| Stage 1: Temporal variables |  |  |  |  |  |
|  **~ Nest age + nest age2**  | **4** | **-62.40** | **132.9** | **0.00** | **0.151** |
|  ~ Intercept  | 2 | -64.88 | 133.8 | 0.86 | 0.098 |
|  ~ Nest age + nest age2+ date  | 5 | -62.16 | 134.5 | 1.60 | 0.068 |
|  ~ Nest age + nest age2 + nest stage  | 5 | -62.18 | 134.6 | 1.62 | 0.067 |
|  ~ Date | 3  | -64.62 | 135.3  | 2.38 | 0.046 |
|  ~ Nest age + nest age2+ date + date2 | 6  | -61.65 | 135.6  | 2.65 | 0.040 |
|  ~ Nest stage | 3  | -64.86 | 135.8  | 2.87 | 0.036 |
|  ~ Nest age | 3  | -64.86 | 135.8  | 2.88 | 0.036 |
|  ~ Nest age + nest age2+ date + nest stage | 6  | -62.03 | 136.3  | 3.41 | 0.027 |
|  ~ Date + date2 | 4  | -64.23 | 136.6  | 3.66 | 0.024 |
| Stage 2: Habitat variables |  |  |  |  |  |
|  **~ Nest age + nest age2 + understory height + canopy cover + concealment**  | **7** | **-57.79** | **130.0** | **0.00** | **0.046** |
|  ~ Nest age+ nest.age2 + understory height + canopy cover  | 6 | -59.02  | 130.3  | 0.37  | 0.038 |
|  ~ Nest age + nest.age2 + understory height + canopy cover+ concealment+ canopy height  | 8 | -57.15  | 130.8  | 0.83  | 0.030 |
|  ~ Nest age + nest.age2 + understory height+ canopy cover+ concealment + nest height  | 8 | -57.17  | 130.8  | 0.87  | 0.030 |
|  ~ Nest age + nest.age2 + understory height + canopy cover+ concealment + nest height + canopy height  | 9 | -56.14  | 130.9  | 0.95  | 0.029 |
|  ~ Nest age + nest.age2 + understory height + canopy cover+ nest height  | 7 | -58.59  | 131.6  | 1.61  | 0.021 |
|  ~ Nest age + nest age2 + understory height + canopy cover + concealment + understory cover  | 8 | -57.70  | 131.9  | 1.94  | 0.018 |
|  ~ Nest age + nest age2 + understory height + canopy cover + canopy height | 7  | -58.82 | 132.0  | 2.06  | 0.016 |
|  ~ Nest age + nest age2 + understory height + canopy cover+ concealment + predator index | 9  | -56.82 | 132.3  | 2.30  | 0.015 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Zonotrichia capensis* |  |  |  |  |  |
| **Model**  All models include season as random effect | **K** | **LL** | **AICc** | **ΔAICc** | **Weight** |
| Stage 1: Temporal variables |  |  |  |  |  |
|  **~ Camera + nest age + nest age2 + nest stage**  | **6** | **-55.97**  | **124.2**  | **0.00** | **0.215** |
|  ~ Camera + nest age + nest age2+ nest stage+ date  | 7  | -55.71  | 125.8  | 1.56  | 0.098 |
|  ~ Camera + nest age+ nest age2 + nest stage+ date + date2  | 8  | -55.31 | 127.1  | 2.88  | 0.051 |
|  ~ Camera + nest age+ nest ge2 | 5  | -58.56 | 127.3 | 3.09  | 0.046 |
|  ~ Camera + nest age+ nest age2 + date | 6  | -57.95 | 128.2  | 3.97  | 0.030 |
|  ~ Camera + nest age+ nest stage + date  | 6  | -58.54 | 129.4  | 5.14 | 0.016 |
|  ~ Camera + nest age+ nest age2 + date + date2  | 7  | -57.56 | 129.5  | 5.28  | 0.015 |
|  ~ Camera + nest age+ nest stage | 5  | -59.66 | 129.5  | 5.31  | 0.015 |
|  ~ Camera + nest age + date | 5  | -59.79 | 129.8  | 5.55  | 0.013 |
|  ~ Camera + nest age+ nest stage- date + date2  | 7  | -57.77 | 129.9  | 5.70  | 0.012 |
| Stage 2: Habitat variables |  |  |  |  |  |
|  **~ Camera + nest age + nest age2 + nest stage**  | **6** | **-55.97**  | **124.2**  | **0.00** | **0.118** |
|  **~** Camera + nest age + nest age2 + nest stage + concealment | 7 | -55.85  | 126.1  | 1.86  | 0.046 |
|  **~** Camera + nest age + nest age2 + nest stage + canopy height | 7 | -55.89 | 126.2  | 1.94  | 0.045 |
|  **~** Camera + nest age + nest age2 + nest stage + understory height | 7  | -55.95 | 126.3  | 2.05  | 0.042 |
|  **~** Camera + nest age + nest age2 + nest stage + canopy cover | 7  | -55.97 | 126.3  | 2.09 | 0.041 |
|  **~** Camera + nest age + nest age2 + nest stage + understory cover | 7  | -55.97 | 126.3  | 2.09  | 0.041 |
|  **~** Camera + nest age + nest age2 + nest stage + concealment + canopy height | 8  | -55.81 | 128.1  | 3.89  | 0.017 |
|  **~** Camera + nest age + nest age2 + nest stage + concealment + understory height | 8  | -55.84 | 128.2  | 3.94  | 0.016 |
|  **~** Camera + nest age + nest age2 + nest stage + concealment + understory cover | 8  | -55.85 | 128.2  | 3.97 | 0.016 |
|  **~** Camera + nest age + nest age2 + nest stage + concealment + canopy cover | 8  | -55.85 | 128.2  | 3.97  | 0.016 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Phrygilus patagonicus* |  |  |  |  |  |
| **Model**  | **K** | **LL** | **AICc** | **ΔAICc** | **Weight** |
| Stage 1: Temporal variables |  |  |  |  |  |
|  **~ Nest age** | **2** | **-26.78**  | **57.6**  | **0.00**  | **0.075** |
|  ~ Nest stage | 2  | -26.92 | 57.9  | 0.28  | 0.065 |
|  ~ Intercept | 1  | -27.96 | 57.9  | 0.34  | 0.064 |
|  ~ Date  | 2 | -27.11  | 58.3  | 0.66  | 0.054 |
|  ~ Nest age + nest age2 | 3  | -26.12 | 58.3  | 0.72  | 0.053 |
|  ~ Date + date2 | 3 | -26.31  | 58.7  | 1.09  | 0.044 |
|  ~ Nest age + date  | 3  | -26.54 | 59.2  | 1.55  | 0.035 |
|  ~ Nest stage + date  | 3  | -26.60 | 59.3  | 1.68  | 0.033 |
|  ~ Nest age + nest stage  | 3  | -26.71 | 59.5  | 1.90  | 0.029 |
|  ~ Nest age + date + date2 | 4  | -25.78 | 59.7  | 2.09  | 0.026 |
| Stage 2: Habitat variables |  |  |  |  |  |
|  **~ Nest age + concealment - understory cover - understory height** | **5**  | **-22.53** | **55.3**  | **0.00**  | **0.034** |
|  ~ Nest age + concealment + understory cover + understory height + canopy cover + canopy height + nest height  | 8 | -20.03 | 56.6 | 1.30 | 0.018 |
|  ~ Nest age + concealment + understory cover + understory height + canopy cover + canopy height + nest height + nest height2 | 9 | -19.16 | 57.0 | 1.70 | 0.015 |
|  ~ Nest age + concealment + understory cover + understory height + canopy cover  | 6 | -22.39 | 57.1 | 1.80 | 0.014 |
|  ~ Nest age + concealment + understory cover + understory height + canopy height | 6 | -22.44 | 57.2 | 1.90 | 0.013 |
|  ~ Nest age + concealment + understory cover + understory height + nest height  | 6 | -22.53 | 57.4 | 2.08 | 0.012 |
|  ~ Nest age + concealment + understory cover  | 4 | -24.62 | 57.4 | 2.10 | 0.012 |
|  ~ Nest age + understory cover + understory height | 4 | -24.70 | 57.5 | 2.27 | 0.011 |
|  ~ Nest age  | 2 | -26.78 | 57.6 | 2.33 | 0.011 |
|  ~ Concealment + understory cover + understory height | 4 | -24.84 | 57.8 | 2.55 | 0.010 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Turdus falcklandii* |  |  |  |  |  |
| **Model**  | **K** | **LL** | **AICc** | **ΔAICc** | **Weight** |
| Stage 1: Temporal variables |  |  |  |  |  |
|  **~ Nest age + nest age2 + nest stage** | **4** | **-7.04** | **22.7** | **0.00** | **0.258** |
|  ~ Nest stage + stage  | 3 | -8.97 | 24.3 | 1.63 | 0.114 |
|  ~ Nest age + nest age2 | 3 | -9.01 | 24.4 | 1.69 | 0.111 |
|  ~ Nest stage | 2 | -10.36 | 24.9 | 2.21 | 0.085 |
|  ~ Nest age + nest age2 + nest stage+ date | 5 | -7.03 | 25.0 | 2.30 | 0.081 |
|  ~ Nest stage + date | 3 | -9.41 | 25.2 | 2.50 | 0.074 |
|  ~ Nest age + nest stage + date | 4 | -8.81 | 26.2 | 3.54 | 0.044 |
|  ~ Nest age + nest age2 + date | 4 | -8.87 | 26.3 | 3.66 | 0.041 |
|  ~ Intercept | 1 | -12.40 | 26.9 | 4.17 | 0.032 |
|  ~ Date | 2 | -12.24 | 28.7 | 5.98 | 0.013 |
| Stage 2: Habitat variables  |  |  |  |  |  |
|  **~ Understory cover** | **2** | **-8.89** | **22.0** | **0.00** | **0.060** |
| ~ Nest age + nest age2 + nest stage | 4 | -7.04 | 22.7 | 0.72 | 0.042 |
|  ~ Understory cover + nest age + nest age2  | 4 | -7.08 | 22.8 | 0.80 | 0.040 |
| ~ Understory cover + nest stage | 3 | -8.45 | 23.3 | 1.30 | 0.031 |
| ~ Understory cover + concealment  | 3 | -8.57 | 23.5 | 1.54 | 0.028 |
| ~ Nest age + nest age2 + canopy height | 4 | -7.64 | 23.9 | 1.93 | 0.023 |
| ~ Nest stage + canopy height | 3 | -8.78 | 23.9 | 1.97 | 0.022 |
| ~ Understory cover + nest age  | 3 | -8.82 | 24.0 | 2.03 | 0.022 |
|  ~ Understory cover + canopy height  | 3 | -8.83 | 24.0 | 2.07 | 0.021 |
|  ~ Understory cover + understory height | 3 | -8.89 | 24.1 | 2.18 | 0.020 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Anairetes parulus*  |  |  |  |  |  |
| **Model**  | **K** | **LL** | **AICc** | **ΔAICc** | **Weight** |
| Stage 1: Temporal variables |  |  |  |  |  |
|  **~ Nest age + nest age2** | **3**  | **-12.65** | **31.4**  | **0.00**  | **0.366** |
| ~ Nest age + nest age2 + date + date2 | 5  | -11.16 | 32.7  | 1.24  | 0.197 |
| ~ Nest age + nest age2 + date | 4 | -12.63 | 33.49 | 2.06 | 0.131 |
| ~ Nest age + nest age2 + date + date2 + nest stage | 6 | -10.87 | 34.23 | 2.81 | 0.090 |
| ~ Nest age + nest age2 + date + nest stage | 5 | -12.35 | 35.05 | 3.62 | 0.060 |
|  ~ Intercept | 1 | -18.91 | 39.85 | 8.42 | 0.005 |
|  ~ Nest stage | 2 | -18.87 | 41.81 | 10.38 | 0.002 |
|  ~ Date | 2 | -18.87 | 41.81 | 10.39 | 0.002 |
|  ~ Nest age | 2 | -18.91 | 41.90 | 10.47 | 0.002 |
|  ~ Date + date2 | 3 | -18.05 | 42.24 | 10.81 | 0.002 |
| Stage 2: Habitat variables  |  |  |  |  |  |
|  **~ Nest age + nest age2 + nest height + understory cover**  | **5** | **-9.42** | **29.2** | **0** | **0.145** |
|  ~ Nest age + nest age2 + nest height + nest height2 + understory cover | 6 | -8.37 | 29.2 | 0.03 | 0.143 |
|  ~ Nest age + nest age2 + nest height | 4 | -11.04 | 30.3 | 1.11 | 0.083 |
|  ~ Nest age + nest age2 + nest height + nest height2 | 5 | -10.11 | 30.6 | 1.37 | 0.073 |
|  ~ Nest age + nest age2 + nest height + nest height2 + understory cover + canopy cover | 7 | -8.29 | 31.2 | 2.04 | 0.052 |
|  ~ Nest age + nest age2 + understory height + canopy cover | 5 | -10.51 | 31.4 | 2.17 | 0.049 |
|  ~ Nest age + nest age2  | 3 | -12.65 | 31.4 | 2.23 | 0.048 |
|  ~ Nest age + nest age2 + understory cover + canopy cover | 5 | -10.62 | 31.6 | 2.39 | 0.044 |
|  ~ Nest age + nest age2 + nest height + canopy cover | 5 | -10.62 | 31.6 | 2.40 | 0.044 |
|  ~ Nest age + nest age2 + understory cover + understory height + canopy cover  | 6 | -9.88 | 32.3 | 3.06 | 0.032 |