**Territorial behaviour of male roe deer: a telemetry study of spatial behaviour and activity levels**

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**Supplementary materials**

**Fig. S1.** Activity levels (mean ± SE) of three male roe deer groups from the North-Eastern Apennines (grouped according to their spatial behaviour) in three bimonths during the territorial period, from March to August 2009.



**Table S1.** Model selection based on linear mixed models explaining the variation in male roe deer activity levels from the North-Eastern Apennines, Central Italy, from March to August 2009. Empty space: term not included in a given model; BF: broadleaved forests; df: degrees of freedom; log Lik: log likelihood; AICc: corrected Akaike information criterion; Δ AICc: difference in the AICc value between a given model and the most parsimonious one; w: Akaike weight. Models are ordered by ascending AICc values, with the confidence set of six models at the top of the list in bold.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Intercept | Age class | Bimonth | Cluster | Day period | BF | Shrubs | df | log Lik | AICc | Δ AICc | w |
|  **✔** | **✔** |   | **✔** | **✔** | **✔** | **✔** | **12** | **223.27** | **–421.8** | **0** | **0.166** |
| **✔** | **✔** | **✔** | **✔** | **✔** | **✔** | **✔** | **14** | **224.9** | **–420.8** | **0.98** | **0.101** |
| **✔** |   | **✔** |   | **✔** |   |   | **8** | **218.22** | **–420.1** | **1.71** | **0.07** |
| **✔** | **✔** | **✔** |   | **✔** |   |   | **10** | **220.27** | **–420** | **1.79** | **0.068** |
| **✔** | **✔** | **✔** |   | **✔** | **✔** |   | **11** | **221.3** | **–420** | **1.83** | **0.066** |
| **✔** | **✔** |   |   | **✔** | **✔** | **✔** | **10** | **220.18** | **–419.9** | **1.97** | **0.062** |
| ✔ | ✔ | ✔ |   | ✔ | ✔ | ✔ | 12 | 222.18 | –419.6 | 2.18 | 0.056 |
| ✔ | ✔ |   |   | ✔ |   |   | 8 | 217.74 | –419.2 | 2.67 | 0.044 |
| ✔ |   |   |   | ✔ |   |   | 6 | 215.62 | –419.1 | 2.77 | 0.041 |
| ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |   | 13 | 222.71 | –418.6 | 3.23 | 0.033 |
| ✔ |   |   |   | ✔ |   | ✔ | 7 | 216.25 | –418.2 | 3.59 | 0.028 |
| ✔ | ✔ |   |   | ✔ |   | ✔ | 9 | 218.28 | –418.2 | 3.67 | 0.026 |
| ✔ |   | ✔ |   | ✔ |   | ✔ | 9 | 218.25 | –418.1 | 3.73 | 0.026 |
| ✔ |   | ✔ |   | ✔ | ✔ |   | 9 | 218.24 | –418.1 | 3.76 | 0.025 |
| ✔ | ✔ | ✔ |   | ✔ |   | ✔ | 11 | 220.29 | –418 | 3.85 | 0.024 |
| ✔ |   | ✔ | ✔ | ✔ |   |   | 10 | 219.08 | –417.7 | 4.17 | 0.021 |
| ✔ | ✔ |   |   | ✔ | ✔ |   | 9 | 217.84 | –417.3 | 4.55 | 0.017 |
| ✔ |   |   |   | ✔ | ✔ |   | 7 | 215.75 | –417.3 | 4.57 | 0.017 |
| ✔ | ✔ | ✔ | ✔ | ✔ |   |   | 12 | 220.85 | –417 | 4.84 | 0.015 |
| ✔ |   |   | ✔ | ✔ |   |   | 8 | 216.5 | –416.7 | 5.16 | 0.013 |
| ✔ |   |   |   | ✔ | ✔ | ✔ | 8 | 216.4 | –416.5 | 5.35 | 0.011 |
| ✔ |   | ✔ |   | ✔ | ✔ | ✔ | 10 | 218.36 | –416.2 | 5.61 | 0.01 |
| ✔ | ✔ |   | ✔ | ✔ |   |   | 10 | 218.35 | –416.2 | 5.63 | 0.01 |
| ✔ |   |   | ✔ | ✔ |   | ✔ | 9 | 217.08 | –415.7 | 6.08 | 0.008 |
| ✔ |   | ✔ | ✔ | ✔ | ✔ |   | 11 | 219.14 | –415.7 | 6.14 | 0.008 |
| ✔ |   | ✔ | ✔ | ✔ |   | ✔ | 11 | 219.1 | –415.6 | 6.23 | 0.007 |
| ✔ | ✔ |   | ✔ | ✔ |   | ✔ | 11 | 218.91 | –415.2 | 6.62 | 0.006 |
| ✔ | ✔ | ✔ | ✔ | ✔ |   | ✔ | 13 | 220.87 | –414.9 | 6.91 | 0.005 |
| ✔ |   |   | ✔ | ✔ | ✔ |   | 9 | 216.56 | –414.7 | 7.11 | 0.005 |
| ✔ | ✔ |   | ✔ | ✔ | ✔ |   | 11 | 218.64 | –414.7 | 7.15 | 0.005 |
| ✔ |   |   | ✔ | ✔ | ✔ | ✔ | 10 | 217.36 | –414.2 | 7.61 | 0.004 |
| ✔ |   | ✔ | ✔ | ✔ | ✔ | ✔ | 12 | 219.3 | –413.9 | 7.93 | 0.003 |
| ✔ | ✔ |   | ✔ |   | ✔ | ✔ | 9 | 180.75 | –343.1 | 78.73 | 0 |
| ✔ | ✔ | ✔ | ✔ |   | ✔ | ✔ | 11 | 182.1 | –341.6 | 80.23 | 0 |
| ✔ | ✔ |   |   |   | ✔ | ✔ | 7 | 177.56 | –340.9 | 80.97 | 0 |
| ✔ | ✔ | ✔ |   |   | ✔ |   | 8 | 178.52 | –340.7 | 81.11 | 0 |
| ✔ |   | ✔ |   |   |   |   | 5 | 175.19 | –340.2 | 81.58 | 0 |
| ✔ | ✔ | ✔ |   |   |   |   | 7 | 177.24 | –340.2 | 81.6 | 0 |
| ✔ | ✔ |   |   |   |   |   | 5 | 175.16 | –340.2 | 81.63 | 0 |
| ✔ | ✔ | ✔ |   |   | ✔ | ✔ | 9 | 179.28 | –340.1 | 81.68 | 0 |
| ✔ |   |   |   |   |   |   | 3 | 173.05 | –340 | 81.79 | 0 |
| ✔ | ✔ | ✔ | ✔ |   | ✔ |   | 10 | 180.12 | –339.7 | 82.09 | 0 |
| ✔ |   |   |   |   |   | ✔ | 4 | 173.55 | –339 | 82.82 | 0 |
| ✔ | ✔ |   |   |   |   | ✔ | 6 | 175.58 | –339 | 82.85 | 0 |
| ✔ | ✔ |   |   |   | ✔ |   | 6 | 175.39 | –338.6 | 83.23 | 0 |
| ✔ |   | ✔ |   |   | ✔ |   | 6 | 175.22 | –338.3 | 83.58 | 0 |
| ✔ |   | ✔ |   |   |   | ✔ | 6 | 175.21 | –338.2 | 83.59 | 0 |
| ✔ | ✔ | ✔ |   |   |   | ✔ | 8 | 177.25 | –338.2 | 83.66 | 0 |
| ✔ |   |   |   |   | ✔ |   | 4 | 173.13 | –338.2 | 83.66 | 0 |
| ✔ |   | ✔ | ✔ |   |   |   | 7 | 176.05 | –337.8 | 83.98 | 0 |
| ✔ |   |   | ✔ |   |   |   | 5 | 173.92 | –337.7 | 84.12 | 0 |
| ✔ | ✔ |   | ✔ |   |   |   | 7 | 175.77 | –337.3 | 84.55 | 0 |
| ✔ |   |   |   |   | ✔ | ✔ | 5 | 173.7 | –337.3 | 84.57 | 0 |
| ✔ | ✔ | ✔ | ✔ |   |   |   | 9 | 177.82 | –337.2 | 84.6 | 0 |
| ✔ |   |   | ✔ |   |   | ✔ | 6 | 174.38 | –336.6 | 85.26 | 0 |
| ✔ |   | ✔ |   |   | ✔ | ✔ | 7 | 175.33 | –336.4 | 85.43 | 0 |
| ✔ | ✔ |   | ✔ |   | ✔ |   | 8 | 176.33 | –336.3 | 85.49 | 0 |
| ✔ | ✔ |   | ✔ |   |   | ✔ | 8 | 176.2 | –336.1 | 85.75 | 0 |
| ✔ |   | ✔ | ✔ |   | ✔ |   | 8 | 176.14 | –335.9 | 85.88 | 0 |
| ✔ |   | ✔ | ✔ |   |   | ✔ | 8 | 176.06 | –335.8 | 86.03 | 0 |
| ✔ |   |   | ✔ |   | ✔ |   | 6 | 173.95 | –335.7 | 86.12 | 0 |
| ✔ | ✔ | ✔ | ✔ |   |   | ✔ | 10 | 177.83 | –335.2 | 86.66 | 0 |
| ✔ |   |   | ✔ |   | ✔ | ✔ | 7 | 174.66 | –335.1 | 86.77 | 0 |
| ✔ |   | ✔ | ✔ |   | ✔ | ✔ | 9 | 176.28 | –334.1 | 87.68 | 0 |