**Table S3:** Context 2 – Field. Top-ranked models from the linear mixed effects models and generalized linear mixed models analysing the effect of GPS transmitter attachment. Parameters explaining the response variables maintenance behaviour, dorsal feather preening, locomotion, foraging, social interactions (including initiated and received affiliative and agonistic behaviours) and CM are given. The individual identity was fitted as random factor. ΔAICc – differences of the second order Akaike information criterion between the best model and the other top-ranked models, logLik – log-likelihood.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Response variable | Model | ΔAICc | logLik | Akaike weight |
| **1) Behavioural categories** |
| Maintenance behaviour | Phase | 0.00 | -297.697 | 0.800 |
| Dorsal feather preening | Phase | 0.00 | 1189.778 | 0.815 |
| Locomotion | Phase | 0.00 | 164.127 | 0.859 |
| Foraging | Phase | 0.00 | -189.181 | 0.814 |
| Initiated affiliative behaviour | Phase+Experimental group+Phase\*Experimental group | 0.00 | -22.919 | 0.963 |
| Received affiliative behaviour | Phase+Experimental group+Phase\*Experimental group | 0.00 | 16.083 | 0.874 |
| Received agonistic behaviour | Phase | 0.00 | 556.925 | 0.784 |
| **2) Physiological parameter** |
| CM | Phase+Experimental group+Phase\*Experimental group | 0.00 | -3230.637 | 1.000 |

**Table S4:** Context 2 – Field. Model-averaged coefficients of final models. Shown are the coefficients including adjusted standard errors (SE), lower and upper confidence intervals (CI) as well as the relative importance of the top-ranked models.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Response variable | Coefficients | Estimate | Adjusted SE | CI lower limit (2.5%) | CI upper limit (97.5%) | Relative importance |
| **1) Behavioural categories** |
| Maintenance behaviour | Intercept | 0.671 | 0.039 | 0.492 | 0.627 |  |
|  | Phase 3 | -0.157 | 0.049 | -0.153 | 0017 | 1 |
|  | Phase 4 | -0.339 | 0.048 | -0.292 | -0.113 | 1 |
|  | Phase 5 | -0.141 | 0.058 | -0.119 | 0.115 | 1 |
| Dorsal feather preening | Intercept | 0.981 | 0.012 | 0.914 | 0.982 |  |
|  | Phase 3 | -0.025 | 0.014 | -0.039 | 0.012 | 1 |
|  | Phase 4 | -0.004 | 0.017 | -0.002 | 0.063 | 1 |
|  | Phase 5 | 0.013 | 0.017 | 0.006 | 0.076 | 1 |
| Locomotion | Intercept | 0.641 | 0.040 | 0.564 | 0.720 |  |
|  | Phase 3 | 0.074 | 0.036 | 0.028 | 0.168 | 1 |
|  | Phase 4 | 0.279 | 0.051 | 0.234 | 0.441 | 1 |
|  | Phase 5 | 0.187 | 0.048 | 0.073 | 0.272 | 1 |
| Foraging | Intercept | 0.439 | 0.045 | 0.428 | 0.609 |  |
|  | Phase 3 | 0.193 | 0.045 | 0.018 | 0.194 | 1 |
|  | Phase 4 | 0.492 | 0.072 | 0.265 | 0.550 | 1 |
|  | Phase 5 | 0.246 | 0.059 | 0.032 | 0.282 | 1 |
| Initiated affiliative behaviour | Intercept | 0.900 | 0.067 | 0.768 | 1.031 |  |
|  | Logger group | -0.105 | 0.090 | -0.282 | 0.072 | 1 |
|  | Control group | 0.006 | 0.094 | -0.179 | 0.190 | 1 |
|  | Phase 3 | -0.131 | 0.057 | -0.242 | -0.020 | 1 |
|  | Phase 4 | -0.274 | 0.061 | -0.394 | -0.154 | 1 |
|  | Phase 5 | -0.144 | 0.067 | -0.276 | -0.013 | 1 |
|  | Logger group\*Phase 3 | 0.232 | 0.081 | 0.073 | 0.391 | 1 |
|  | Control group\*Phase 3 | -0.074 | 0.077 | -0.226 | 0.077 | 1 |
|  | Logger group\*Phase 4 | 0.174 | 0.091 | -0.004 | 0.353 | 1 |
|  | Control group\*Phase 4 | 0.128 | 0.089 | -0.047 | 0.303 | 1 |
|  | Logger group\*Phase 5 | 0.012 | 0.094 | -0.172 | 0.197 | 1 |
|  | Control group\*Phase 5 | -0.008 | 0.095 | -0.194 | 0.179 | 1 |
| Received affiliative behaviour | Intercept | 0.897 | 0.062 | 0.774 | 1.019 |  |
|  | Logger group | -0.071 | 0.084 | -0.235 | 0.094 | 1 |
|  | Control group | 0.023 | 0.087 | -0.148 | 0.195 | 1 |
|  | Phase 3 | -0.164 | 0.053 | -0.268 | -0.060 | 1 |
|  | Phase 4 | -0.353 | 0.055 | -0.461 | -0.245 | 1 |
|  | Phase 5 | -0.183 | 0.062 | -0.305 | -0.061 | 1 |
|  | Logger group\*Phase 3 | 0.249 | 0.077 | 0.099 | 0.400 | 1 |
|  | Control group\*Phase 3 | 0.059 | 0.076 | -0.091 | 0.209 | 1 |
|  | Logger group\*Phase 4 | 0.284 | 0.086 | 0.116 | 0.452 | 1 |
|  | Control group\*Phase 4 | 0.188 | 0.085 | 0.023 | 0.354 | 1 |
|  | Logger group\*Phase 5 | 0.151 | 0.092 | -0.029 | 0.331 | 1 |
|  | Control group\*Phase 5 | -0.020 | 0.090 | -0.197 | 0.157 | 1 |
| Received agonistic behaviour | Intercept | 0.886 | 0.031 | 0.825 | 0.948 |  |
|  | Phase 3 | 0.060 | 0.031 | 0.000 | 0.120 | 1 |
|  | Phase 4 | 0.069 | 0.037 | -0.005 | 0.142 | 1 |
|  | Phase 5 | -0.010 | 0.036 | -0.080 | 0.060 | 1 |
| **2) Physiological parameter** |
| CM | Intercept | 104.266 | 10.117 | 84.437 | 124.094 |  |
|  | Control group | -30.517 | 14.379 | -58.699 | -2.335 | 1 |
|  | Logger group | -17.682 | 14.353 | -45.813 | 10.449 | 1 |
|  | Phase 2 | -31.243 | 26.293 | -82.776 | 20.291 | 1 |
|  | Phase 3 | -33.004 | 11.749 | -56.031 | -9.977 | 1 |
|  | Phase 4 | -62.831 | 12.121 | -86.588 | -39.074 | 1 |
|  | Phase 5 | -29.239 | 12.121 | -53.379 | -5.098 | 1 |
|  | Control group\*Phase 2 | -16.238 | 68.329 | -150.161 | 117.684 | 1 |
|  | Logger group\*Phase 2 | 0.533 | 41.379 | -80.568 | 81.635 | 1 |
|  | Control group\*Phase 3 | 24.244 | 16.708 | -8.503 | 56.990 | 1 |
|  | Logger group\*Phase 3 | 4.711 | 16.255 | -27.148 | 36.570 | 1 |
|  | Control group\*Phase 4 | 29.116 | 17.264 | -4.721 | 62.953 | 1 |
|  | Logger group\*Phase 4 | 40.769 | 17.648 | 6.180 | 75.358 | 1 |
|  | Control group\*Phase 5 | 10.356 | 17.861 | -24.651 | 45.364 | 1 |
|  | Logger group\*Phase 5 | 11.563 | 17.876 | -23.474 | 46.600 | 1 |

For experimental group, handling group was set to zero.

For phase, phase 1 was set to zero.