

Supplementary information to:

Social life histories: jackdaw dominance increases with age, terminally declines, and shortens life span

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Table S1, model B. Testing whether between - and within-individual effects on dominance are significantly different. The effect of age (x_{ij}), average age (\bar{x}_j) (eq. 3 in the methods section), tarsus size, and the variable [returned?], on social dominance. N=149 bird years, of 69 individuals. Deviance denotes the -2 loglikelihood value of the model fit.

| Model B | deviance | fixed Effect | slope | s.e. | P-value |
|---------|----------|---|--------|-------|---------|
| Null | 83.94 | intercept (β_0) | | | |
| Final | 56.12 | intercept (β_0) | 11.004 | 4.217 | <0.001 |
| | | tarsus | -0.226 | 0.092 | 0.014 |
| | | age ($\beta_W(x_{ij})$) | -0.231 | 0.069 | <0.001 |
| | | average age ($(\beta_B - \beta_W) \bar{x}_j$) | 0.178 | 0.085 | 0.037 |
| | | returned? | -0.589 | 0.281 | 0.035 |

Table S2. The effect of colony composition variables on social dominance, when added to the final model in table 1. Variables are explained in the methods section of the main document.

| fixed effect | slope | s.e. | P-value |
|-----------------------|--------|-------|---------|
| %newrank | -0.002 | 0.006 | 0.689 |
| %deadrank | -0.007 | 0.010 | 0.452 |
| %deadrank * delta age | 0.003 | 0.007 | 0.627 |
| %newrank * delta age | -0.003 | 0.004 | 0.489 |