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| Table S1: Summary statistics of the datasets used at each stage of reproduction assessed | | | | | |  |  |
|  | **Min** | **1st Quartile** | **Median** | **Mean** | **3rd Quartile** | **Max** | **N** |
| Unpooled dataset |  |  |  |  |  |  |  |
| Eggs Laid | 1 | 5.5 | 9 | 12.13 | 16 | 54 | 255 |
| Eggs Incubated | 0 | 4 | 7 | 6.67 | 9 | 24 | 238 |
| Eggs Hatched | 0 | 2 | 5 | 4.72 | 7 | 12 | 212 |
| Chicks Fledged | 0 | 0 | 2 | 2.72 | 4 | 9 | 152 |
| Pooled by group year |  |  |  |  |  |  |  |
| Eggs Laid | 1 | 6 | 12 | 14.31 | 18 | 69 | 216 |
| Eggs Incubated | 0 | 4 | 7 | 7.09 | 10 | 32 | 224 |
| Eggs Hatched | 0 | 3 | 5 | 5.08 | 7 | 12 | 197 |
| Chicks Fledged | 0 | 0 | 2 | 2.36 | 4 | 9 | 175 |
| First known breeding attempt |  |  |  |  |  |  |  |
| Eggs Laid | 1 | 5 | 8 | 12.06 | 16 | 54 | 194 |
| Eggs Incubated | 0 | 4 | 7 | 6.77 | 9 | 24 | 187 |
| Eggs Hatched | 0 | 2 | 5 | 4.77 | 7 | 12 | 164 |
| Chicks Fledged | 0 | 0 | 3 | 2.81 | 5 | 9 | 120 |
| First known successful breeding attempt |  |  |  |  |  |  |  |
| Eggs Laid | 4 | 7 | 11 | 14.26 | 18.25 | 54 | 80 |
| Eggs Incubated | 4 | 7 | 8 | 8.56 | 10 | 16 | 80 |
| Eggs Hatched | 1 | 5 | 6 | 6.25 | 8 | 12 | 88 |
| Chicks Fledged | 1 | 2 | 4 | 3.84 | 5 | 9 | 96 |

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| Table S2: Results (in log scale) of generalized linear mixed models to test for an effect of female group size, the number of nesting attempts per season, and study site on the group-total and per capita number of eggs laid, incubated, and hatched, and chicks fledged in smooth-billed anis using the subset dataset that looked only at first nests. | | | | | | | | |
|  | Overall | | | | Per capita | | | |
|  | **estimate** | **std error** | **statistic** | **p value** | **estimate** | **std error** | **statistic** | **p value** |
| ***Eggs Laid*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 1.680 | 0.125 | 13.479 | <0.001 | 1.735 | 0.124 | 14.038 | <0.001 |
| Female group size | 0.237 | 0.032 | 7.425 | <0.001 | -0.088 | 0.029 | -3.011 | 0.003 |
| Study Site | 0.160 | 0.151 | 1.062 | 0.288 | 0.040 | 0.147 | 0.274 | 0.784 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.233 |  |  |  | 0.220 |  |  |  |
| Year (std. dev) | 0.214 |  |  |  | 0.253 |  |  |  |
| ***Eggs Incubated*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 1.467 | 0.132 | 11.135 | <0.001 | 1.511 | 0.132 | 11.470 | <0.001 |
| Female group size | 0.139 | 0.035 | 3.961 | <0.001 | -0.185 | 0.033 | -5.612 | <0.001 |
| Study Site | 0.049 | 0.150 | 0.325 | 0.745 | -0.052 | 0.150 | -0.348 | 0.728 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.000 |  |  |  | 0.000 |  |  |  |
| Year (std. dev) | 0.185 |  |  |  | 0.236 |  |  |  |
| ***Eggs Hatched*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 1.154 | 0.121 | 9.506 | <0.001 | 1.214 | 0.120 | 10.149 | <0.001 |
| Female group size | 0.110 | 0.027 | 3.999 | <0.001 | -0.209 | 0.028 | -7.421 | <0.001 |
| Study Site | 0.095 | 0.168 | 0.564 | 0.572 | -0.040 | 0.166 | -0.243 | 0.808 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.439 |  |  |  | 0.453 |  |  |  |
| Year (std. dev) | 0.156 |  |  |  | 0.113 |  |  |  |
| ***Chicks Fledged*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 0.476 | 0.190 | 2.499 | 0.012 | 0.497 | 0.213 | 2.340 | 0.019 |
| Female group size | 0.154 | 0.047 | 3.273 | 0.001 | -0.177 | 0.045 | -3.901 | <0.001 |
| Study Site | -0.173 | 0.251 | -0.691 | 0.490 | -0.232 | 0.220 | -1.058 | 0.290 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.503 |  |  |  | 0.473 |  |  |  |
| Year (std. dev) | 0.180 |  |  |  | 0.343 |  |  |  |

Table S3: Results of binomial models to test whether the probability of reproductive success changed with group size, including the Proportion of eggs that were incubated, incubated eggs that hatched, and chicks that fledged using a subset that only included first nests.

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| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  | **estimate** | **std error** | **statistic** | **p value** |
| ***Proportion incubated*** |  |  |  |  |
| Fixed |  |  |  |  |
| Intercept | 1.155 | 0.266 | 4.342 | <0.001 |
| Female group size | -0.211 | 0.044 | -4.800 | <0.001 |
| Study Site | -0.273 | 0.395 | -0.693 | 0.489 |
| Random |  |  |  |  |
| Territory (std. dev.) | 1.252 |  |  |  |
| Year (std. dev) | 0.535 |  |  |  |
| ***Proportion hatched*** |  |  |  |  |
| Fixed |  |  |  |  |
| Intercept | 0.889 | 0.388 | 2.288 | 0.022 |
| Female group size | -0.034 | 0.067 | -0.504 | 0.615 |
| Study Site | 0.294 | 0.545 | 0.540 | 0.589 |
| Random |  |  |  |  |
| Territory (std. dev.) | 1.713 |  |  |  |
| Year (std. dev) | 0.795 |  |  |  |
| ***Proportion fledged*** |  |  |  |  |
| Fixed |  |  |  |  |
| Intercept | -0.813 | 0.452 | -1.799 | 0.072 |
| Female group size | 0.129 | 0.085 | 1.521 | 0.128 |
| Study Site | 0.285 | 0.522 | 0.545 | 0.586 |
| Random |  |  |  |  |
| Territory (std. dev.) | 1.246 |  |  |  |
| Year (std. dev) | 0.934 |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table S4: Results (in log scale) of generalized linear mixed models to test for an effect of female group size, the number of nesting attempts per season, and study site on the group-total and per capita number of eggs laid, incubated, and hatched, and chicks fledged in smooth-billed anis using the subset dataset that looked only at first successful nests (i.e., the group fledged at least one chick). | | | | | | | | |
|  | Overall | | | | Per capita | | | |
|  | **estimate** | **std error** | **statistic** | **p value** | **estimate** | **std error** | **statistic** | **p value** |
| ***Eggs Laid*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 1.833 | 0.125 | 14.662 | <0.001 | 1.854 | 0.126 | 14.688 | <0.001 |
| Female group size | 0.235 | 0.037 | 6.425 | <0.001 | -0.089 | 0.032 | -2.751 | 0.006 |
| Study Site | 0.312 | 0.152 | 2.052 | 0.040 | 0.240 | 0.188 | 1.276 | 0.202 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.180 |  |  |  | 0.247 |  |  |  |
| Year (std. dev) | 0.000 |  |  |  | 0.087 |  |  |  |
| ***Eggs Incubated*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 1.891 | 0.079 | 23.800 | <0.001 | 1.900 | 0.089 | 21.373 | <0.001 |
| Female group size | 0.081 | 0.021 | 3.904 | <0.001 | -0.235 | 0.024 | -9.683 | <0.001 |
| Study Site | 0.070 | 0.100 | 0.698 | 0.485 | 0.029 | 0.100 | 0.287 | 0.774 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.000 |  |  |  | 0.000 |  |  |  |
| Year (std. dev) | 0.000 |  |  |  | 0.000 |  |  |  |
| ***Eggs Hatched*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 1.568 | 0.088 | 17.823 | <0.001 | 1.596 | 0.099 | 16.190 | <0.001 |
| Female group size | 0.088 | 0.023 | 3.814 | <0.001 | -0.232 | 0.027 | -8.532 | <0.001 |
| Study Site | 0.008 | 0.112 | 0.068 | 0.946 | -0.049 | 0.112 | -0.435 | 0.663 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.000 |  |  |  | 0.000 |  |  |  |
| Year (std. dev) | 0.000 |  |  |  | 0.000 |  |  |  |
| ***Chicks Fledged*** |  |  |  |  |  |  |  |  |
| Fixed |  |  |  |  |  |  |  |  |
| Intercept | 1.189 | 0.121 | 9.785 | <0.001 | 1.219 | 0.129 | 9.460 | <0.001 |
| Female group size | 0.051 | 0.032 | 1.622 | 0.105 | -0.272 | 0.036 | -7.598 | <0.001 |
| Study Site | 0.123 | 0.140 | 0.873 | 0.383 | 0.027 | 0.137 | 0.198 | 0.843 |
| Random |  |  |  |  |  |  |  |  |
| Territory (std. dev.) | 0.000 |  |  |  | 0.000 |  |  |  |
| Year (std. dev) | 0.145 |  |  |  | 0.116 |  |  |  |

Table S5: Results of binomial models to test whether the probability of reproductive success changed with group size, including the Proportion of eggs that were incubated, incubated eggs that hatched, and chicks that fledged using a subset that only included first successful nests.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  | **estimate** | **std error** | **statistic** | **p value** |
| ***Proportion incubated*** |  |  |  |  |
| Fixed |  |  |  |  |
| Intercept | 2.186 | 0.345 | 6.343 | <0.001 |
| Female group size | -0.363 | 0.067 | -5.384 | <0.001 |
| Study Site | -0.624 | 0.428 | -1.456 | 0.145 |
| Random |  |  |  |  |
| Territory (std. dev.) | 0.946 |  |  |  |
| Year (std. dev) | 0.551 |  |  |  |
| ***Proportion hatched*** |  |  |  |  |
| Fixed |  |  |  |  |
| Intercept | 1.272 | 0.238 | 5.349 | <0.001 |
| Female group size | -0.034 | 0.060 | -0.568 | 0.570 |
| Study Site | -0.057 | 0.299 | -0.190 | 0.850 |
| Random |  |  |  |  |
| Territory (std. dev.) | 0.357 |  |  |  |
| Year (std. dev) | 0.216 |  |  |  |
| ***Proportion fledged*** |  |  |  |  |
| Fixed |  |  |  |  |
| Intercept | 1.010 | 0.314 | 3.222 | 0.001 |
| Female group size | -0.098 | 0.069 | -1.415 | 0.157 |
| Study Site | 0.465 | 0.368 | 1.265 | 0.206 |
| Random |  |  |  |  |
| Territory (std. dev.) | 0.580 |  |  |  |
| Year (std. dev) | 0.519 |  |  |  |