

**Table S1** Number of non hatched and hatched eggs per each treatment.

| <i>Treatment</i>    | <i>Non Hatched</i> | <i>Hatched</i> | <i>Total</i> | <i>% Hatched</i> |
|---------------------|--------------------|----------------|--------------|------------------|
| <b>Control</b>      | 59                 | 123            | 182          | 67.58            |
| <b>T2</b>           | 13                 | 43             | 56           | 76.78            |
| <b>T4</b>           | 29                 | 41             | 70           | 58.57            |
| <b>T8</b>           | 24                 | 45             | 69           | 65.21            |
| <b>Non injected</b> | 14                 | 219            | 233          | 93.99            |

**Table S2** Initial mixed models for tarsus length, body mass, body condition and gape width of spotless starling on nestling period. Nonsignificant variables were removed from the model based on stepwise selection by *p-values* criterion ( $p < 0.05$ , corresponding to the numbers in bold).

| Independent variable                  | Tarsus length |         |                  | Body mass |         |                  | Body condition |       |                  | Gape width |        |                  |
|---------------------------------------|---------------|---------|------------------|-----------|---------|------------------|----------------|-------|------------------|------------|--------|------------------|
|                                       | d.f.          | F       | P                | d.f.      | F       | P                | d.f.           | F     | P                | d.f.       | F      | P                |
| Treat                                 | 1/560         | 0.88    | 0.3496           | 1/566     | 0.02    | 0.8987           | 1/589          | 0.34  | 0.5623           | 1/591      | 10.83  | <b>0.0011</b>    |
| Treat <sup>2</sup>                    | 1/585         | 0.69    | 0.4061           | 1/584     | 0.73    | 0.3946           | 1/565          | 3.76  | <b>0.0530</b>    | 1/560      | 0.22   | 0.6407           |
| Treat <sup>2</sup> × Age [days]       | 3/538         | 4.94    | <b>0.0022</b>    | 3/539     | 4.17    | <b>0.0062</b>    | 3/545          | 1.68  | 0.1699           | 3/536      | 0.92   | 0.4297           |
| Treat <sup>2</sup> × Sex              | 1/580         | 0.31    | 0.5796           | 1/582     | 0.62    | 0.4309           | 1/573          | 0.32  | 0.5736           | 1/580      | 0.76   | 0.3832           |
| Treat <sup>2</sup> × Sex × Age [days] | 3/530         | 0.13    | 0.9411           | 3/531     | 0.06    | 0.9796           | 3/532          | 0.40  | 0.7508           | 3/529      | 0.02   | 0.9962           |
| Trt × Age [days]                      | 3/538         | 2.30    | 0.0761           | 3/539     | 2.08    | 0.1020           | 3/548          | 1.45  | 0.2271           | 3/541      | 0.11   | 0.9540           |
| Trt × Sex × Age [days]                | 3/533         | 0.20    | 0.8960           | 3/534     | 0.15    | 0.9307           | 3/535          | 0.43  | 0.7292           | 3/532      | 1.65   | 0.1760           |
| Age [days]                            | 3/538         | 3257.40 | <b>&lt;0.001</b> | 3/539     | 1662.52 | <b>&lt;0.001</b> | 3/551          | 0.00  | 0.9997           | 3/548      | 924.72 | <b>&lt;0.001</b> |
| Sex                                   | 1/575         | 10.99   | <b>0.0010</b>    | 1/577     | 15.74   | <b>&lt;0.001</b> | 1/588          | 0.56  | 0.4537           | 1/596      | 9.98   | <b>0.0017</b>    |
| Trt × Sex                             | 1/573         | 0.52    | 0.4717           | 1/576     | 0.69    | 0.4050           | 1/587          | 0.20  | 0.6553           | 1/586      | 0.04   | 0.8420           |
| Sex × Age [days]                      | 3/538         | 5.68    | <b>&lt;0.001</b> | 3/539     | 7.46    | <b>&lt;0.001</b> | 3/539          | 0.01  | 0.9983           | 3/547      | 2.43   | 0.0640           |
| Clutch laying date                    | 1/130         | 26.65   | <b>&lt;0.001</b> | 1/119     | 1.84    | 0.1771           | 1/89.6         | 13.96 | <b>0.0003</b>    | 1/88.4     | 15.55  | <b>&lt;0.001</b> |
| Egg volume                            | 1/261         | 5.41    | <b>0.0208</b>    | 1/233     | 9.26    | <b>0.0026</b>    | 1/140          | 9.77  | <b>0.0022</b>    | 1/149      | 0.53   | 0.4674           |
| Laying order                          | 1/571         | 95.01   | <b>&lt;0.001</b> | 1/574     | 90.77   | <b>&lt;0.001</b> | 1/600          | 18.40 | <b>&lt;0.001</b> | 1/592      | 1.38   | 0.2402           |
| EDP                                   | 1/422         | 20.84   | <b>&lt;0.001</b> | 1/418     | 13.11   | <b>&lt;0.001</b> | 1/254          | 0.66  | 0.4171           | 1/250      | 3.97   | <b>0.0474</b>    |
| Brood size                            | 1/582         | 3.65    | <b>0.0566</b>    | 1/583     | 10.87   | <b>0.0010</b>    | 1/591          | 1.17  | 0.2794           | 1/590      | 9.86   | <b>0.0018</b>    |
| Tarsus length                         | —             | —       | —                | —         | —       | —                | —              | —     | —                | 1/588      | 71.74  | <b>&lt;0.001</b> |

**Table S3.** Summary of final repeated-measures mixed models showing the estimates and standard error (estimate  $\pm$  SE) of all the variables affecting tarsus length, body mass, body condition and gape width of nestlings. Models were run using Proc Mixed with Satterthwaite correction to adjust the degrees of freedom. Age was measured in days (3, 6, 10 and 14).

|                                      | <b>Tarsus length</b>                | <b>Body mass</b>                    | <b>Body condition</b>               | <b>Gape width</b>                   |
|--------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>Independent variable</b>          | <i>Estimate <math>\pm</math> SE</i> | <i>Estimate <math>\pm</math> SE</i> | <i>Estimate <math>\pm</math> SE</i> | <i>Estimate <math>\pm</math> SE</i> |
| Intercept                            | 29.958 $\pm$ 0.224                  | 72.161 $\pm$ 0.979                  | -0.1610 $\pm$ 0.095                 | 23.235 $\pm$ 0.139                  |
| Treat                                | 0.156 $\pm$ 0.075                   | 0.307 $\pm$ 0.335                   | -0.0175 $\pm$ 0.030                 | 0.0829 $\pm$ 0.025                  |
| Age [3]                              | -18.709 $\pm$ 0.245                 | -58.865 $\pm$ 1.099                 | —                                   | -3.645 $\pm$ 0.128                  |
| Age [6]                              | -11.520 $\pm$ 0.242                 | -39.906 $\pm$ 1.086                 | —                                   | 1.517 $\pm$ 0.128                   |
| Age [10]                             | -2.219 $\pm$ 0.242                  | -8.824 $\pm$ 1.086                  | —                                   | 2.713 $\pm$ 0.128                   |
| Treat $\times$ Age [3]               | -0.212 $\pm$ 0.103                  | -0.585 $\pm$ 0.465                  | —                                   | —                                   |
| Treat $\times$ Age [6]               | -0.214 $\pm$ 0.103                  | -0.775 $\pm$ 0.463                  | —                                   | —                                   |
| Treat $\times$ Age [10]              | -0.0476 $\pm$ 0.103                 | 0.224 $\pm$ 0.463                   | —                                   | —                                   |
| Sex (Males)                          | 0.864 $\pm$ 0.185                   | 4.571 $\pm$ 0.831                   | —                                   | 0.327 $\pm$ 0.104                   |
| Age [3] $\times$ Sex (Males)         | -0.994 $\pm$ 0.252                  | -5.051 $\pm$ 1.130                  | —                                   | —                                   |
| Age [6] $\times$ Sex (Males)         | -0.686 $\pm$ 0.250                  | -3.748 $\pm$ 1.124                  | —                                   | —                                   |
| Age [10] $\times$ Sex (Males)        | -0.393 $\pm$ 0.250                  | -2.097 $\pm$ 1.124                  | —                                   | —                                   |
| Treat <sup>2</sup>                   | -0.0916 $\pm$ 0.034                 | -0.0792 $\pm$ 0.152                 | 0.0292 $\pm$ 0.015                  | —                                   |
| Treat <sup>2</sup> $\times$ Age [3]  | 0.119 $\pm$ 0.045                   | 0.309 $\pm$ 0.202                   | —                                   | —                                   |
| Treat <sup>2</sup> $\times$ Age [6]  | 0.148 $\pm$ 0.044                   | 0.477 $\pm$ 0.200                   | —                                   | —                                   |
| Treat <sup>2</sup> $\times$ Age [10] | 0.0313 $\pm$ 0.044                  | -0.161 $\pm$ 0.200                  | —                                   | —                                   |
| Clutch laying date                   | 0.278 $\pm$ 0.054                   | —                                   | -0.1210 $\pm$ 0.032                 | -0.177 $\pm$ 0.045                  |
| Egg volume                           | 0.112 $\pm$ 0.048                   | 0.643 $\pm$ 0.211                   | 0.0959 $\pm$ 0.031                  | —                                   |
| Laying order                         | -0.251 $\pm$ 0.026                  | -1.099 $\pm$ 0.115                  | -0.0823 $\pm$ 0.019                 | —                                   |
| EDP                                  | -0.184 $\pm$ 0.040                  | -0.644 $\pm$ 0.177                  | —                                   | 0.075 $\pm$ 0.037                   |
| Brood size                           | -0.0725 $\pm$ 0.038                 | -0.559 $\pm$ 0.169                  | —                                   | 0.117 $\pm$ 0.037                   |
| Tarsus length                        | —                                   | —                                   | —                                   | 0.258 $\pm$ 0.030                   |