### Supplementary information for Spurgin *et al.* "Telomeres reveal silver spoon effects in a wild population"

**Table S1** Model selection table for analysis of factors affecting early life telomere length in juvenile Seychelles warblers. Only models that remained in the top model set for model averaging (AICc 6 compared to the top model) are included here. TQ = territory quality.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | df | AICc | Delta AICc | Weight |
| Sex + Age + Tarsus + Age x tarsus | 9 | 665.72 | 0.00 | 0.04 |
| Sex + Age + Tarsus + TQ + Age x tarsus | 10 | 665.94 | 0.22 | 0.04 |
| Age + Tarsus + Age x tarsus | 8 | 665.96 | 0.24 | 0.04 |
| Age + Tarsus + TQ + Age x tarsus | 9 | 666.11 | 0.39 | 0.03 |
| Helpers + Age + Tarsus + Age x helpers + Age x tarsus | 10 | 666.58 | 0.86 | 0.03 |
| Helpers + Sex + Age + Tarsus + Age x helpers + Age x tarsus | 11 | 666.63 | 0.91 | 0.03 |
| Helpers + Age + Tarsus + TQ + Age x helpers + Age x tarsus | 11 | 666.66 | 0.94 | 0.03 |
| Helpers + Sex + Age + Tarsus + TQ + Age x helpers + Age x tarsus | 12 | 666.78 | 1.06 | 0.02 |
| Helpers + Sex + Age + Tarsus + Age x tarsus | 10 | 667.02 | 1.30 | 0.02 |
| Helpers + Age + Tarsus + Age x tarsus | 9 | 667.19 | 1.48 | 0.02 |
| Helpers + Sex + Age + Tarsus + TQ + Age x tarsus | 11 | 667.21 | 1.49 | 0.02 |
| Helpers + Age + Tarsus + TQ + Age x tarsus | 10 | 667.31 | 1.59 | 0.02 |
| Sex + Age + Tarsus + TQ + Age x tarsus + Age x TQ | 11 | 667.41 | 1.69 | 0.02 |
| Age + Tarsus + TQ + Age x tarsus + Age x TQ | 10 | 667.55 | 1.83 | 0.02 |
| Sex + Age + Tarsus + Age x sex + Age x tarsus | 10 | 667.56 | 1.84 | 0.02 |
| Sex + Age + Non helpers + Tarsus + Age x tarsus | 10 | 667.68 | 1.96 | 0.02 |
| Sex + Age + Body mass + Tarsus + Age x tarsus | 10 | 667.71 | 1.99 | 0.01 |
| Sex + Age + Tarsus + TQ + Age x sex + Age x tarsus | 11 | 667.73 | 2.01 | 0.01 |
| Age + Non helpers + Tarsus + Age x tarsus | 9 | 667.89 | 2.17 | 0.01 |
| Sex + Age + Non helpers + Tarsus + TQ + Age x tarsus | 11 | 667.91 | 2.19 | 0.01 |
| Sex + Age + Body mass + Tarsus + TQ + Age x tarsus | 11 | 667.98 | 2.26 | 0.01 |
| Age + Body mass + Tarsus + Age x tarsus | 9 | 667.98 | 2.26 | 0.01 |
| Age + Non helpers + Tarsus + TQ + Age x tarsus | 10 | 668.06 | 2.34 | 0.01 |
| Helpers + Age + Tarsus + TQ + Age x helpers + Age x tarsus + Age x TQ | 12 | 668.09 | 2.37 | 0.01 |
| Age + Body mass + Tarsus + TQ + Age x tarsus | 10 | 668.11 | 2.39 | 0.01 |
| Helpers + Sex + Age + Tarsus + TQ + Age x helpers + Age x tarsus + Age x TQ | 13 | 668.23 | 2.52 | 0.01 |
| Helpers + Sex + Age + Tarsus + Age x helpers + Age x sex + Age x tarsus | 12 | 668.55 | 2.83 | 0.01 |
| Helpers + Age + Non helpers + Tarsus + Age x helpers + Age x tarsus | 11 | 668.55 | 2.84 | 0.01 |
| Helpers + Sex + Age + Body mass + Tarsus + Age x helpers + Age x tarsus | 12 | 668.56 | 2.84 | 0.01 |
| Helpers + Age + Body mass + Tarsus + Age x helpers + Age x tarsus | 11 | 668.62 | 2.90 | 0.01 |
| Helpers + Sex + Age + Non helpers + Tarsus + Age x helpers + Age x tarsus | 12 | 668.62 | 2.90 | 0.01 |
| Helpers + Sex + Age + Tarsus + TQ + Age x tarsus + Age x TQ | 12 | 668.62 | 2.91 | 0.01 |
| Helpers + Age + Non helpers + Tarsus + TQ + Age x helpers + Age x tarsus | 12 | 668.64 | 2.93 | 0.01 |
| Helpers + Sex + Age + Tarsus + TQ + Age x helpers + Age x sex + Age x tarsus | 13 | 668.66 | 2.94 | 0.01 |
| Helpers + Age + Tarsus + TQ + Age x tarsus + Age x TQ | 11 | 668.70 | 2.98 | 0.01 |
| Helpers + Age + Body mass + Tarsus + TQ + Age x helpers + Age x tarsus | 12 | 668.70 | 2.98 | 0.01 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x helpers + Age x tarsus | 13 | 668.78 | 3.06 | 0.01 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x helpers + Age x tarsus | 13 | 668.79 | 3.07 | 0.01 |
| Helpers + Sex + Age + Tarsus + Age x sex + Age x tarsus | 11 | 668.88 | 3.16 | 0.01 |
| Helpers + Sex + Age + Body mass + Tarsus + Age x tarsus | 11 | 668.99 | 3.27 | 0.01 |
| Helpers + Sex + Age + Non helpers + Tarsus + Age x tarsus | 11 | 668.99 | 3.28 | 0.01 |
| Helpers + Sex + Age + Tarsus + TQ + Age x sex + Age x tarsus | 12 | 669.02 | 3.30 | 0.01 |
| Helpers + Age + Non helpers + Tarsus + Age x tarsus | 10 | 669.15 | 3.43 | 0.01 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x tarsus | 12 | 669.20 | 3.48 | 0.01 |
| Sex + Age + Tarsus + TQ + Age x sex + Age x tarsus + Age x TQ | 12 | 669.22 | 3.50 | 0.01 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x tarsus | 12 | 669.23 | 3.51 | 0.01 |
| Helpers + Age + Body mass + Tarsus + Age x tarsus | 10 | 669.23 | 3.51 | 0.01 |
| Helpers + Age + Non helpers + Tarsus + TQ + Age x tarsus | 11 | 669.27 | 3.55 | 0.01 |
| Helpers + Age + Body mass + Tarsus + TQ + Age x tarsus | 11 | 669.34 | 3.62 | 0.01 |
| Sex + Age + Non helpers + Tarsus + TQ + Age x tarsus + Age x TQ | 12 | 669.39 | 3.67 | 0.01 |
| Sex + Age + Body mass + Tarsus + TQ + Age x tarsus + Age x TQ | 12 | 669.45 | 3.73 | 0.01 |
| Age + Non helpers + Tarsus + TQ + Age x tarsus + Age x TQ | 11 | 669.50 | 3.79 | 0.01 |
| Sex + Age + Non helpers + Tarsus + Age x sex + Age x tarsus | 11 | 669.51 | 3.80 | 0.01 |
| Sex + Age + Body mass + Tarsus + Age x sex + Age x tarsus | 11 | 669.52 | 3.80 | 0.01 |
| Sex + Age + Non helpers + Tarsus + Age x non helpers + Age x tarsus | 11 | 669.54 | 3.83 | 0.01 |
| Age + Body mass + Tarsus + TQ + Age x tarsus + Age x TQ | 11 | 669.55 | 3.83 | 0.01 |
| Sex + Age + Body mass + Non helpers + Tarsus + Age x tarsus | 11 | 669.66 | 3.94 | 0.01 |
| Sex + Age + Non helpers + Tarsus + TQ + Age x sex + Age x tarsus | 12 | 669.70 | 3.98 | 0.01 |
| Sex + Age + Body mass + Tarsus + Age x mass + Age x tarsus | 11 | 669.72 | 4.00 | 0.01 |
| Sex + Age + Body mass + Tarsus + TQ + Age x sex + Age x tarsus | 12 | 669.75 | 4.03 | 0.01 |
| Sex + Age + Non helpers + Tarsus + TQ + Age x non helpers + Age x tarsus | 12 | 669.77 | 4.05 | 0.01 |
| Age + Non helpers + Tarsus + Age x non helpers + Age x tarsus | 10 | 669.80 | 4.09 | 0.01 |
| Age + Body mass + Non helpers + Tarsus + Age x tarsus | 10 | 669.93 | 4.21 | 0.00 |
| Sex + Age + Body mass + Non helpers + Tarsus + TQ + Age x tarsus | 12 | 669.94 | 4.22 | 0.00 |
| Age + Non helpers + Tarsus + TQ + Age x non helpers + Age x tarsus | 11 | 669.96 | 4.24 | 0.00 |
| Sex + Age + Body mass + Tarsus + TQ + Age x mass + Age x tarsus | 12 | 670.00 | 4.28 | 0.00 |
| Age + Body mass + Tarsus + Age x mass + Age x tarsus | 10 | 670.02 | 4.30 | 0.00 |
| Age + Body mass + Non helpers + Tarsus + TQ + Age x tarsus | 11 | 670.08 | 4.36 | 0.00 |
| Helpers + Age + Non helpers + Tarsus + TQ + Age x helpers + Age x tarsus + Age x TQ | 13 | 670.09 | 4.37 | 0.00 |
| Helpers + Sex + Age + Tarsus + TQ + Age x helpers + Age x sex + Age x tarsus + Age x TQ | 14 | 670.13 | 4.41 | 0.00 |
| Helpers + Age + Body mass + Tarsus + TQ + Age x helpers + Age x tarsus + Age x TQ | 13 | 670.14 | 4.42 | 0.00 |
| Age + Body mass + Tarsus + TQ + Age x mass + Age x tarsus | 11 | 670.15 | 4.43 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x helpers + Age x tarsus + Age x TQ | 14 | 670.24 | 4.52 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x helpers + Age x tarsus + Age x TQ | 14 | 670.25 | 4.53 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + Age x helpers + Age x sex + Age x tarsus | 13 | 670.43 | 4.71 | 0.00 |
| Helpers + Sex + Age + Tarsus + TQ + Age x sex + Age x tarsus + Age x TQ | 13 | 670.45 | 4.73 | 0.00 |
| Helpers + Age + Non helpers + Tarsus + Age x helpers + Age x non helpers + Age x tarsus | 12 | 670.50 | 4.78 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + Age x helpers + Age x non helpers + Age x tarsus | 13 | 670.52 | 4.80 | 0.00 |
| Helpers + Sex + Age + Body mass + Non helpers + Tarsus + Age x helpers + Age x tarsus | 13 | 670.53 | 4.81 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + Age x helpers + Age x mass + Age x tarsus | 13 | 670.54 | 4.82 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + Age x helpers + Age x sex + Age x tarsus | 13 | 670.54 | 4.82 | 0.00 |
| Helpers + Age + Non helpers + Tarsus + TQ + Age x helpers + Age x non helpers + Age x tarsus | 13 | 670.58 | 4.86 | 0.00 |
| Helpers + Age + Body mass + Non helpers + Tarsus + Age x helpers + Age x tarsus | 12 | 670.59 | 4.87 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x tarsus + Age x TQ | 13 | 670.62 | 4.90 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x helpers + Age x sex + Age x tarsus | 14 | 670.62 | 4.90 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x tarsus + Age x TQ | 13 | 670.65 | 4.93 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x helpers + Age x sex + Age x tarsus | 14 | 670.66 | 4.94 | 0.00 |
| Helpers + Age + Body mass + Tarsus + Age x helpers + Age x mass + Age x tarsus | 12 | 670.66 | 4.94 | 0.00 |
| Helpers + Age + Non helpers + Tarsus + TQ + Age x tarsus + Age x TQ | 12 | 670.68 | 4.96 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x helpers + Age x non helpers + Age x tarsus | 14 | 670.68 | 4.96 | 0.00 |
| Helpers + Age + Body mass + Non helpers + Tarsus + TQ + Age x helpers + Age x tarsus | 13 | 670.70 | 4.98 | 0.00 |
| Helpers + Age + Body mass + Tarsus + TQ + Age x tarsus + Age x TQ | 12 | 670.73 | 5.01 | 0.00 |
| Helpers + Age + Body mass + Tarsus + TQ + Age x helpers + Age x mass + Age x tarsus | 13 | 670.75 | 5.03 | 0.00 |
| Helpers + Sex + Age + Body mass + Non helpers + Tarsus + TQ + Age x helpers + Age x tarsus | 14 | 670.77 | 5.05 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x helpers + Age x mass + Age x tarsus | 14 | 670.78 | 5.07 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + Age x sex + Age x tarsus | 12 | 670.81 | 5.09 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + Age x sex + Age x tarsus | 12 | 670.85 | 5.13 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + Age x non helpers + Age x tarsus | 12 | 670.87 | 5.15 | 0.00 |
| Helpers + Sex + Age + Body mass + Non helpers + Tarsus + Age x tarsus | 12 | 670.95 | 5.23 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + Age x mass + Age x tarsus | 12 | 670.99 | 5.27 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x sex + Age x tarsus | 13 | 671.00 | 5.28 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x sex + Age x tarsus | 13 | 671.01 | 5.29 | 0.00 |
| Helpers + Sex + Age + Non helpers + Tarsus + TQ + Age x non helpers + Age x tarsus | 13 | 671.06 | 5.34 | 0.00 |
| Helpers + Age + Non helpers + Tarsus + Age x non helpers + Age x tarsus | 11 | 671.07 | 5.35 | 0.00 |
| Helpers + Age + Body mass + Non helpers + Tarsus + Age x tarsus | 11 | 671.19 | 5.47 | 0.00 |
| Sex + Age + Non helpers + Tarsus + TQ + Age x sex + Age x tarsus + Age x TQ | 13 | 671.19 | 5.47 | 0.00 |
| Helpers + Age + Non helpers + Tarsus + TQ + Age x non helpers + Age x tarsus | 12 | 671.19 | 5.47 | 0.00 |
| Sex + Age + Non helpers + Tarsus + TQ + Age x non helpers + Age x tarsus + Age x TQ | 13 | 671.20 | 5.48 | 0.00 |
| Helpers + Sex + Age + Body mass + Non helpers + Tarsus + TQ + Age x tarsus | 13 | 671.21 | 5.49 | 0.00 |
| Sex + Age + Body mass + Tarsus + TQ + Age x sex + Age x tarsus + Age x TQ | 13 | 671.24 | 5.52 | 0.00 |
| Helpers + Sex + Age + Body mass + Tarsus + TQ + Age x mass + Age x tarsus | 13 | 671.26 | 5.54 | 0.00 |
| Helpers + Age + Body mass + Tarsus + Age x mass + Age x tarsus | 11 | 671.28 | 5.56 | 0.00 |
| Helpers + Age + Body mass + Non helpers + Tarsus + TQ + Age x tarsus | 12 | 671.31 | 5.59 | 0.00 |
| Age + Non helpers + Tarsus + TQ + Age x non helpers + Age x tarsus + Age x TQ | 12 | 671.37 | 5.65 | 0.00 |
| Helpers + Age + Body mass + Tarsus + TQ + Age x mass + Age x tarsus | 12 | 671.38 | 5.66 | 0.00 |
| Sex + Age + Non helpers + Tarsus + Age x sex + Age x non helpers + Age x tarsus | 12 | 671.39 | 5.67 | 0.00 |
| Sex + Age + Tarsus + TQ + Age x sex | 10 | 671.39 | 5.67 | 0.00 |
| Sex + Age + Body mass + Non helpers + Tarsus + TQ + Age x tarsus + Age x TQ | 13 | 671.42 | 5.71 | 0.00 |
| Sex + Age + Body mass + Non helpers + Tarsus + Age x sex + Age x tarsus | 12 | 671.46 | 5.74 | 0.00 |
| Sex + Age + Body mass + Tarsus + Age x sex + Age x mass + Age x tarsus | 12 | 671.49 | 5.77 | 0.00 |
| Sex + Age + Body mass + Tarsus + TQ + Age x mass + Age x tarsus + Age x TQ | 13 | 671.49 | 5.77 | 0.00 |
| Sex + Age + Tarsus + Age x sex | 9 | 671.50 | 5.78 | 0.00 |
| Age + Body mass + Non helpers + Tarsus + TQ + Age x tarsus + Age x TQ | 12 | 671.52 | 5.80 | 0.00 |
| Sex + Age + Body mass + Non helpers + Tarsus + Age x non helpers + Age x tarsus | 12 | 671.54 | 5.82 | 0.00 |
| Sex + Age + Non helpers + Tarsus + TQ + Age x sex + Age x non helpers + Age x tarsus | 13 | 671.56 | 5.84 | 0.00 |
| Age + Body mass + Tarsus + TQ + Age x mass + Age x tarsus + Age x TQ | 12 | 671.59 | 5.87 | 0.00 |
| Sex + Age + Body mass + Non helpers + Tarsus + Age x mass + Age x tarsus | 12 | 671.67 | 5.96 | 0.00 |
| Sex + Age + Body mass + Non helpers + Tarsus + TQ + Age x sex + Age x tarsus | 13 | 671.70 | 5.98 | 0.00 |

**Table S2** Model selection table for analysis of factors affecting RTL in Seychelles warbler nestlings, using longitudinal data. Only models that remained in the top model set for model averaging (AICc 6 compared to the top model) are included here. TQ = territory quality.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | df | AICc | Delta AICc | Weight |
| Sex + Tarsus | 5 | 105.31 | 0.00 | 0.10 |
| Tarsus | 4 | 106.10 | 0.80 | 0.07 |
| Sex + Tarsus + TQ | 6 | 106.62 | 1.31 | 0.05 |
| Sex + Body mass | 5 | 106.63 | 1.32 | 0.05 |
| Body mass | 4 | 106.85 | 1.54 | 0.05 |
| Tarsus + TQ | 5 | 107.06 | 1.75 | 0.04 |
| Sex + Body mass + Tarsus | 6 | 107.13 | 1.83 | 0.04 |
| Helpers + Sex + Tarsus | 6 | 107.45 | 2.14 | 0.03 |
| Sex + Non helpers + Tarsus | 6 | 107.55 | 2.25 | 0.03 |
| Body mass + TQ | 5 | 107.81 | 2.50 | 0.03 |
| Null model | 3 | 107.92 | 2.61 | 0.03 |
| Sex + Body mass + TQ | 6 | 107.93 | 2.62 | 0.03 |
| TQ | 4 | 108.15 | 2.84 | 0.02 |
| Helpers + Tarsus | 5 | 108.16 | 2.85 | 0.02 |
| Non helpers + Tarsus | 5 | 108.16 | 2.85 | 0.02 |
| Body mass + Tarsus | 5 | 108.19 | 2.89 | 0.02 |
| Sex + Body mass + Tarsus + TQ | 7 | 108.60 | 3.29 | 0.02 |
| Helpers + Sex + Body mass | 6 | 108.67 | 3.36 | 0.02 |
| Helpers + Sex + Tarsus + TQ | 7 | 108.81 | 3.50 | 0.02 |
| Helpers + Body mass | 5 | 108.83 | 3.53 | 0.02 |
| Sex + Body mass + Non helpers | 6 | 108.88 | 3.57 | 0.02 |
| Sex + Non helpers + Tarsus + TQ | 7 | 108.90 | 3.59 | 0.02 |
| Body mass + Non helpers | 5 | 108.93 | 3.62 | 0.02 |
| Non helpers + Tarsus + TQ | 6 | 109.10 | 3.80 | 0.01 |
| Helpers + Tarsus + TQ | 6 | 109.17 | 3.86 | 0.01 |
| Body mass + Tarsus + TQ | 6 | 109.25 | 3.94 | 0.01 |
| Helpers + Sex + Body mass + Tarsus | 7 | 109.29 | 3.98 | 0.01 |
| Sex + Body mass + Non helpers + Tarsus | 7 | 109.42 | 4.12 | 0.01 |
| Helpers + Sex + Non helpers + Tarsus | 7 | 109.74 | 4.43 | 0.01 |
| Helpers + Body mass + TQ | 6 | 109.85 | 4.54 | 0.01 |
| Body mass + Non helpers + TQ | 6 | 109.87 | 4.56 | 0.01 |
| Sex | 4 | 109.91 | 4.60 | 0.01 |
| Helpers | 4 | 109.94 | 4.63 | 0.01 |
| Non helpers | 4 | 109.99 | 4.68 | 0.01 |
| Helpers + Sex + Body mass + TQ | 7 | 110.03 | 4.72 | 0.01 |
| Sex + TQ | 5 | 110.18 | 4.87 | 0.01 |
| Non helpers + TQ | 5 | 110.20 | 4.89 | 0.01 |
| Helpers + Non helpers + Tarsus | 6 | 110.21 | 4.90 | 0.01 |
| Sex + Body mass + Non helpers + TQ | 7 | 110.21 | 4.90 | 0.01 |
| Helpers + TQ | 5 | 110.22 | 4.91 | 0.01 |
| Helpers + Body mass + Tarsus | 6 | 110.27 | 4.96 | 0.01 |
| Body mass + Non helpers + Tarsus | 6 | 110.30 | 4.99 | 0.01 |
| Helpers + Sex + Body mass + Tarsus + TQ | 8 | 110.80 | 5.50 | 0.01 |
| Helpers + Body mass + Non helpers | 6 | 110.90 | 5.59 | 0.01 |
| Sex + Body mass + Non helpers + Tarsus + TQ | 8 | 110.93 | 5.62 | 0.01 |
| Helpers + Sex + Body mass + Non helpers | 7 | 110.95 | 5.65 | 0.01 |
| Helpers + Sex + Non helpers + Tarsus + TQ | 8 | 111.12 | 5.82 | 0.01 |
| Helpers + Non helpers + Tarsus + TQ | 7 | 111.19 | 5.89 | 0.01 |

**Figure S1** RTL in relation to the time between sampling events. Lines and shaded areas represent fitted values and 95% confidence limits from general linear models. See also Figure 4, main text.

