

Supplementary material

Supplemental material Appendix 1.

Table 1. Predictor variables included in top candidate models ($\Delta AIC_c < 2$) investigating the timing of the first off bout each morning with female ID as a random effect. Fixed effects, AIC_c , ΔAIC_c and the AIC weight are presented. (T = ambient morning temperature, attempt = nest attempt, age = female age, clutch = clutch size and stage = nest stage: incubation or nestling day 0 – 3, \times indicates interaction).

Fixed effects	AIC_c	ΔAIC_c	weight
clutch + T	2594.6	0	0.14
T + attempt	2594.7	0.08	0.14
T	2594.7	0.09	0.14
T + age	2595.9	1.31	0.08
T + attempt + year	2596	1.4	0.07
T + attempt + age	2596.2	1.58	0.07
T \times attempt	2596.2	1.6	0.07
clutch + T + age	2596.2	1.61	0.06
clutch + T + attempt	2596.3	1.62	0.06
clutch + T + year	2596.3	1.65	0.06
T + year	2596.4	1.71	0.06
clutch + T + stage	2596.6	1.97	0.05

Supplementary material Table 2. Predictor variables included in top candidate models ($\Delta AIC_c < 2$) investigating the duration of the first off bout each morning with female ID as a random effect. Fixed effects, AIC_c , ΔAIC_c and the AIC weight are presented. (T = ambient morning temperature, attempt = nest attempt, age = female age, clutch = clutch size and stage = nest stage: incubation or nestling day 0 – 3, \times indicates interaction).

Fixed effects	AIC_c	ΔAIC_c	weight
stage	2391.7	0	0.19
stage + clutch + T	2392.2	0.45	0.15
stage + clutch	2392.3	0.61	0.14
stage + T	2392.4	0.7	0.13
stage + clutch + T + age \times T	2392.7	0.93	0.12
stage + T \times age	2392.8	1.06	0.11
stage + attempt	2393.2	1.45	0.09
stage + T + attempt	2393.3	1.55	0.09

Supplementary material Table 3. Predictor variables included in top candidate models

($\Delta AIC_c < 2$) investigating the drop in temperature during the first off bout each morning with female ID as a random effect. Fixed effects, AIC_c , ΔAIC_c and the AIC weight are presented. (T = ambient morning temperature, duration = duration of the first morning off bout, age = female age, clutch = clutch size and stage = nest stage: incubation or nestling day 0 – 3, \times indicates interaction).

Fixed effects	AIC_c	ΔAIC_c	weight
clutch + duration + stage + T	1517.5	0	0.23
clutch + duration + age \times stage + T	1518.1	0.62	0.17
clutch + duration + age \times stage + age \times T	1518.2	0.74	0.16
clutch + stage + duration \times T	1518.7	1.2	0.13
clutch + duration + stage + T + age	1519	1.48	0.11
clutch \times duration + stage + T	1519.1	1.57	0.11
clutch + duration + stage \times age + T + age \times duration	1519.4	1.94	0.09

Supplementary material Table 4. Predictor variables included in top candidate models ($\Delta AIC_c < 2$) investigating low nest temperature during the first off bout each morning with female ID as a random effect. Fixed effects, AIC_c , ΔAIC_c and the AIC weight are presented. (T = ambient morning temperature, duration = duration of the first morning off bout, age = female age, clutch = clutch size and stage = nest stage: incubation or nestling day 0 – 3, \times indicates interaction).

Fixed effects	AIC_c	ΔAIC_c	weight
clutch + duration \times stage + T	1571.3	0	0.499
duration \times stage + T	1572.3	1.05	0.295
clutch + duration \times stage + T + age	1573	1.77	0.206

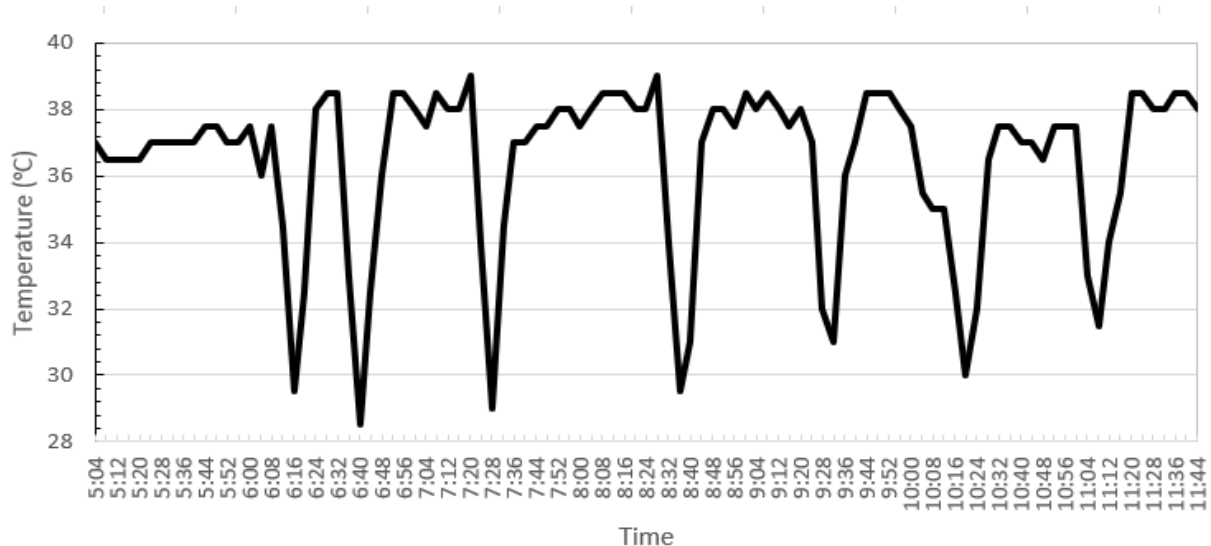


Figure 1. Temperature trace from a hooded warbler nest during the incubation stage recorded on May 21, 2015 from 5:04 am until 11:44 am recorded at 4 min intervals. On and off bouts are indicated by a 1.5°C change in temperature between successive 4 min periods. Nest of female ID = MAWM (band combination: blue over aluminum, white over blue).