Supplemental Tables

Table S1. Results of covariates for developmental and post-hatching variables of *A. sagrei*.

| Response | Covariate | Covariate results | | |
|---|--------------------|-------------------|------------|----------|
| | | β (SE) | t | р |
| Water uptake (mg) | Developmental age | 4.6 (0.75) | 6.1 | <0.0001 |
| | | | | |
| Heart rate (bpm) | Temperature | 7.98 (2.47) | 3.2 | 0.002 |
| 0 | De els constal con | 0.02 (0.46) | 5 4 | .0.0004 |
| O ₂ consumption at 20.7 °C (microL/hr) | Developmental age | 0.82 (0.16) | 5.1 | <0.0001 |
| O ₂ consumption at 26.3 °C (microL/hr) | Developmental age | 1.38 (0.21) | 6.6 | <0.0001 |
| | | | | |
| SVL (mm) | Initial egg mass | 0.02 (0.002) | 13.15 | < 0.0001 |
| Body mass (mg) | Initial egg mass | 0.69 (0.03) | 21.3 | < 0.0001 |
| , , , | 00 | , | | |
| Body condition | Initial egg mass | 0.002 (0.0002) | 12.35 | < 0.0001 |
| Tail length (mm) | Initial egg mass | 0.03 (0.005) | 7.21 | < 0.0001 |
| rain tengen (min) | | 0.00 (0.000) | , | V 0.0001 |
| Sprint speed (m/s) | Initial SVL | 0.02 (0.006) | 3.03 | 0.003 |
| Endurance* | Initial SVL | 0.10 (0.03) | 3.20 | 0.002 |
| Efficialice | IIIIIIII 3VL | 0.10 (0.03) | 3.20 | 0.002 |
| Final SVL (mm) | Initial SVL | 0.70 (0.07) | 9.58 | < 0.0001 |

 β = effect size; SE = standard error; t = t value; p = p value

Table S2. Estimated marginal means for developmental and post-hatching variables of *A. sagrei* that were significantly influenced by season, treatment, or the interaction. Asterisk denotes a variable was log-transformed.

| Response | Season | Treatment | Emmean | SE |
|---------------------------------------|----------|-----------|--------|-------|
| Developmental Rate* | Early | Con | 2.51 | 0.006 |
| | Early | HrM | 2.57 | 0.005 |
| | Early | Nat | 2.59 | 0.006 |
| | Early | Sine | 2.58 | 0.005 |
| | Late | Con | 3.3 | 0.006 |
| | Late | HrM | 3.32 | 0.006 |
| | Late | Nat | 3.29 | 0.006 |
| | Late | Sine | 3.32 | 0.006 |
| Egg survival (probability) | Early | Combined | 0.94 | 0.02 |
| | Late | Combined | 0.98 | 0.01 |
| Water uptake (mg) | Early | Combined | 260.11 | 7.35 |
| | Late | Combined | 166.22 | 7.35 |
| O ₂ consumption at 26.3 °C | Combined | Con | 34.32 | 1.04 |
| (microL/hr) | Combined | HrM | 30.19 | 0.94 |
| | Combined | Nat | 30.37 | 0.90 |
| | Combined | Sine | 31.13 | 0.90 |
| Endurance (m)* | Early | Con | 1.02 | 0.069 |
| | Early | HrM | 1.24 | 0.064 |
| | Early | Nat | 1.36 | 0.065 |
| | Early | Sine | 1.15 | 0.062 |
| | Late | Con | 1.76 | 0.055 |
| | Late | HrM | 1.85 | 0.061 |
| | Late | Nat | 1.72 | 0.058 |
| | Late | Sine | 1.74 | 0.066 |
| Initial body condition | Early | Combined | -0.034 | 0.005 |
| | Late | Combined | 0.035 | 0.005 |
| | Combined | Con | -0.01 | 0.007 |
| | Combined | HrM | 0.016 | 0.007 |
| | Combined | Nat | 0 | 0.007 |
| | Combined | Sine | -0.005 | 0.007 |
| Initial body mass (mg) | Early | Combined | 172.49 | 0.98 |
| | Late | Combined | 178.51 | 0.98 |

| Initial SVL (mm) | Early | Combined | 19.56 | 0.05 |
|----------------------------------|----------|----------|-------|-------|
| | Late | Combined | 19.19 | 0.05 |
| | Combined | Con | 19.35 | 0.06 |
| | Combined | HrM | 19.26 | 0.06 |
| | Combined | Nat | 19.44 | 0.06 |
| | Combined | Sine | 19.46 | 0.06 |
| | | | | |
| Sprint speed (m/s) | Early | Combined | 0.148 | 0.007 |
| | Late | Combined | 0.203 | 0.006 |
| | | | | |
| Hatchling survival (probability) | Early | Combined | 0.63 | 0.05 |
| | Late | Combined | 0.93 | 0.02 |
| | Combined | Con | 0.6 | 0.08 |
| | Combined | HrM | 0.86 | 0.05 |
| | Combined | Nat | 0.93 | 0.03 |
| | Combined | Sine | 0.81 | 0.06 |
| | | | | |
| Tail length (mm) | Early | Combined | 30.18 | 0.14 |
| | Late | Combined | 31.81 | 0.14 |

Con = constant; HrM = hourly means; Nat = natural; Emmean = estimated marginal means; SE = standard error

Table S3. Sample size (n), raw mean (Mean), and standard deviation (SD) for all developmental and post-hatching variables according to season and treatment.

| Response | Season | Incubation treatment | n | Mean | SD |
|--------------------------|--------|----------------------|----|-------|------|
| Heart rate (bpm) | Early | Con | 10 | 62.8 | 6.55 |
| | Early | HrM | 10 | 67.2 | 5.98 |
| | Early | Nat | 10 | 64.6 | 5.56 |
| | Early | Sine | 10 | 63.4 | 5.76 |
| | Late | Con | 10 | 62.2 | 4.83 |
| | Late | HrM | 9 | 67.22 | 8.32 |
| | Late | Nat | 10 | 62.5 | 7.06 |
| | Late | Sine | 10 | 66.1 | 5.65 |
| Incubation period (days) | Early | Con | 46 | 81.5 | 3.75 |
| | Early | HrM | 52 | 76.29 | 3.52 |
| | Early | Nat | 49 | 75.24 | 2.31 |
| | Early | Sine | 52 | 75.96 | 2.94 |
| | Late | Con | 50 | 37.06 | 1.45 |
| | Late | HrM | 47 | 36.51 | 1.33 |
| | Late | Nat | 49 | 37.22 | 1.64 |
| | Late | Sine | 50 | 36.28 | 1.34 |
| O2 consumption (20.7 °C) | Early | Con | 12 | 16.13 | 3.29 |
| microL/hr | Early | HrM | 11 | 17.33 | 3.42 |
| • | Early | Nat | 12 | 19.06 | 3.87 |
| | Early | Sine | 12 | 18.85 | 4.05 |
| | Late | Con | 11 | 19.85 | 4.02 |
| | Late | HrM | 11 | 21.44 | 3.57 |
| | Late | Nat | 12 | 18.68 | 3.22 |
| | Late | Sine | 12 | 21.78 | 3.87 |
| O2 consumption (26.3 °C) | Early | Con | 12 | 26.25 | 3.01 |
| microL/hr | Early | HrM | 11 | 28.37 | 4.66 |
| | Early | Nat | 12 | 28.98 | 7.26 |
| | Early | Sine | 12 | 29.62 | 4.65 |
| | Late | Con | 11 | 35.24 | 3.84 |
| | Late | HrM | 11 | 34.41 | 6.36 |
| | Late | Nat | 12 | 32.74 | 5.42 |
| | Late | Sine | 12 | 34.89 | 5.39 |
| Survival (probability) | Early | Con | 54 | 0.85 | |
| Sa. vivai (probability) | Early | HrM | 55 | 0.85 | |
| | Early | Nat | 51 | 0.96 | |
| | Early | Sine | 54 | 0.96 | |
| | Latte | Con | 51 | 0.98 | |
| | Late | HrM | 50 | 0.94 | |
| | Late | Nat | 50 | 0.98 | |
| | Late | Sine | 50 | 0.98 | |
| Matar untaka / | Fort. | Con | 12 | 250.2 | 64.4 |
| Water uptake (mg) | Early | Con | 12 | 259.2 | 64.4 |
| | Early | HrM | 12 | 260.3 | 88.1 |
| | Early | Nat | 12 | 308.1 | 42.9 |
| | Early | Sine | 12 | 258.3 | 45.6 |
| | Late | Con | 12 | 133.5 | 28.5 |
| | Late | HrM | 12 | 150.8 | 47.4 |
| | Late | Nat | 12 | 158.3 | 62.6 |
| | Late | Sine | 12 | 176.7 | 62.4 |

| Endurance (m) | Endurance (m) | Early | Con | | 20 | 2 NE | 1 27 |
|--|----------------------------------|-------|---------|----------|----|--------|-------|
| Early Sine 38 3.59 1.48 1.41 1 | Endurance (m) | Early | Con | | | 3.05 | 1.27 |
| Early Sine 38 3.59 1.48 Late Con 47 6.07 2.08 2.09 6.04 2.32 Late HrM 39 6.64 2.32 Late Nat 42 5.95 2.17 Late Sine 33 5.92 1.8 Sine 32 20.62 0.81 Early Nat 22 20.62 0.81 Early HrM 17 20.54 0.74 Early Sine 15 21.02 0.77 2.0 | | - | | | | | |
| Late | | • | | | | | |
| Late HrM 39 6.64 2.32 Late Nat 42 5.95 2.17 Late Sine 33 5.92 1.8 | | - | | | | | |
| Late Nat Late Sine S | | Late | Con | 4 | 47 | 6.07 | 2.08 |
| Early Con Received Received Con Received Received Con Received | | Late | HrM | 3 | 39 | 6.64 | 2.32 |
| Final SVL (mm) Early Con Rate Con Con | | Late | Nat | 4 | 42 | 5.95 | 2.17 |
| Early Nat 22 20.62 0.81 | | Late | Sine | <u> </u> | 33 | 5.92 | 1.8 |
| Early Nat 22 20.62 0.81 | Fig. 1 (2) (1 / 22 22) | F. d. | C | | • | 20.04 | 1.01 |
| Early HrM 17 20.54 0.74 | Finai SVL (mm) | - | | | | | |
| Early Sine 15 21.02 0.77 Late Con 21 20.46 0.95 Late HrM 24 20.48 0.84 Late Sine 24 20.54 0.71 Initial body condition Early Con 46 -0.05 0.086 Early HrM 52 -0.016 0.092 Early Nat 49 -0.03 0.072 Early Sine 52 -0.033 0.075 Late HrM 47 0.046 0.069 Late HrM 47 0.046 0.069 Late Nat 49 0.024 0.082 Late Sine 50 0.036 0.072 Late HrM 47 0.046 0.069 Late Nat 49 175.65 17.63 Early Fine 52 175.48 16.79 Late HrM 47 179.85 17.71 Late HrM 47 179.85 17.71 Late HrM 47 179.85 17.71 Late Sine 50 174.73 17.52 Late HrM 47 179.85 17.71 Late Sine 50 181 19.5 Initial SVL (mm) Early Con 46 19.57 1.01 Early Sine 52 175.48 10.79 Late Sine 50 181 19.5 Initial SVL (mm) Early Con 46 19.57 1.01 Early Sine 52 175.74 20.73 Late Sine 50 181 19.5 Initial SVL (mm) Early Con 46 19.57 1.01 Early Sine 52 19.36 0.74 Early Sine 52 19.36 0.74 Early Sine 52 19.36 0.74 Early Sine 52 19.35 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early Sine 38 0.162 0.076 Late HrM 37 0.223 0.081 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 Early Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 | | - | | | | | |
| Late Nat 23 20.34 0.79 | | - | | | | | |
| Late | | Early | Sine | | | 21.02 | 0.77 |
| Late | | Late | Con | : | 21 | 20.46 | 0.95 |
| Late Sine 24 20.54 0.71 | | Late | Nat | | 23 | 20.34 | 0.79 |
| Late Sine 24 20.54 0.71 | | Late | HrM | | 24 | 20.48 | 0.84 |
| Early HrM 52 -0.016 0.092 | | | Sine | | 24 | | |
| Early HrM 52 -0.016 0.092 | 1 90 11 1 190 | | 6 | | | 0.05 | 0.006 |
| Early Nat 49 -0.03 0.072 | initial body condition | - | | | | | |
| Early Sine 52 -0.033 0.07 Late Con 50 0.023 0.075 Late HrM 47 0.046 0.069 Late Nat 49 0.024 0.082 Late Sine 50 0.036 0.072 Initial body mass (mg) Early Con 46 170.09 21.22 Early HrM 52 172.6 20.37 Early Nat 49 175.65 17.63 Early Sine 52 175.48 16.79 Late Con 50 174.73 17.52 Late HrM 47 179.85 17.71 Late Nat 49 175.74 20.73 Late Sine 50 181 19.5 Initial SVL (mm) Early Con 46 19.57 1.01 Early HrM 52 19.36 0.74 Early Nat 49 19.72 0.71 Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Nat 49 19.13 0.67 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 | | - | | | | | |
| Late | | • | | | | | |
| Late | | Early | Sine | | | -0.033 | 0.07 |
| Late Nat Late Sine S | | Late | Con | ! | 50 | 0.023 | 0.075 |
| Late Sine 50 0.036 0.072 | | Late | HrM | 4 | 47 | 0.046 | 0.069 |
| Initial body mass (mg) Early Con 46 170.09 21.22 Early HrM 52 172.6 20.37 Early Nat 49 175.65 17.63 Early Sine 52 175.48 16.79 Late Con 50 174.73 17.52 Late HrM 47 179.85 17.71 Late Nat 49 175.74 20.73 Late Sine 50 181 19.5 Initial SVL (mm) Early Con 46 19.57 1.01 Early HrM 52 19.36 0.74 Early Nat 49 19.72 0.71 Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early Nat 49 19.13 0.67 Late Con 29 0.13 0.075 Early Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 | | Late | Nat | 4 | 49 | 0.024 | 0.082 |
| Early HrM 52 172.6 20.37 | | Late | Sine | | 50 | 0.036 | 0.072 |
| Early HrM 52 172.6 20.37 | | | 6 | | | 470.00 | 24.22 |
| Early Nat 49 175.65 17.63 | Initial body mass (mg) | | | | | | |
| Early Sine 52 175.48 16.79 | | - | | | | | |
| Late Con 50 174.73 17.52 Late HrM 47 179.85 17.71 Late Nat 49 175.74 20.73 Late Sine 50 181 19.5 Initial SVL (mm) Early Con 46 19.57 1.01 Early HrM 52 19.36 0.74 Early Nat 49 19.72 0.71 Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 Early Nat 25 0.88 | | Early | Nat | | | 175.65 | 17.63 |
| Late HrM 47 179.85 17.71 Late Nat 49 175.74 20.73 Late Sine 50 181 19.5 Initial SVL (mm) Early Con 46 19.57 1.01 Early HrM 52 19.36 0.74 Early Nat 49 19.72 0.71 Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 Early Nat 50 0.88 | | Early | Sine | ! | 52 | 175.48 | 16.79 |
| Late Nat 49 175.74 20.73 | | Late | Con | ! | 50 | 174.73 | 17.52 |
| Late Sine 50 181 19.5 | | Late | HrM | 4 | 47 | 179.85 | 17.71 |
| Late Sine 50 181 19.5 | | Late | Nat | 4 | 49 | 175.74 | 20.73 |
| Early HrM 52 19.36 0.74 Early Nat 49 19.72 0.71 Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Nat 25 0.88 | | | | | | | |
| Early HrM 52 19.36 0.74 Early Nat 49 19.72 0.71 Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Nat 25 0.88 | 1 ''' 1 C) (() | | 6 | | | 40.57 | 4.04 |
| Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.72 0.71 Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 Early Nat 25 0.88 | Initial SVL (mm) | | | | | | |
| Early Sine 52 19.75 0.67 Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Nat 25 0.88 | | | | | | | |
| Late Con 50 19.09 0.64 Late HrM 47 19.15 0.62 Late Nat 49 19.13 0.67 Late Sine 50 19.32 0.66 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Nat 25 0.88 | | Early | Nat | | | 19.72 | 0.71 |
| Late Late Nat Late Nat Late Sine 47 19.15 0.62 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 38 0.162 0.095 Late Con 43 0.186 0.074 0.186 0.074 Late HrM 37 0.223 0.081 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Nat 25 0.88 | | Early | Sine | | | 19.75 | 0.67 |
| Late Late Sine Nat Late Sine 49 19.13 0.67 Sprint speed (m/s) Early Con 29 0.13 0.075 Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 38 0.162 0.095 Late Con 43 0.186 0.074 0.186 0.074 Late HrM 37 0.223 0.081 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Nat 25 0.88 | | Late | Con | Į. | 50 | 19.09 | 0.64 |
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| Late Sine 50 19.32 0.66 | | Late | Nat | 4 | 49 | 19.13 | 0.67 |
| Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 Early Nat 25 0.88 | | | Sine | ! | 50 | | 0.66 |
| Early HrM 35 0.154 0.077 Early Nat 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 Early Nat 25 0.88 | Consint and a state (-) | Faul | C - ··· | | 20 | 0.43 | 0.075 |
| Early Nat Early Sine 34 0.16 0.074 Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Nat 25 0.88 | Sprint speed (m/s) | | | | | | |
| Early Sine 38 0.162 0.095 Late Con 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con 25 0.32 Early Nat 25 0.88 | | | | | | | |
| Late Late Late HrM 43 0.186 0.074 Late HrM 37 0.223 0.081 Late Nat Late Sine 40 0.197 0.082 Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Con Early Nat 25 0.32 Early Nat 25 0.88 | | - | | | | | |
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| Late Late Sine Nat Sine 40 0.197 0.082 31 0.194 0.071 Hatchling survival (probability) Early Nat Con Early Nat 25 0.32 25 0.88 | | Late | HrM | 3 | 37 | 0.223 | 0.081 |
| Late Sine 31 0.194 0.071 Hatchling survival (probability) Early Early Nat Con Early Nat 25 0.32 | | | | | | | |
| Early Nat 25 0.88 | | | | | | | |
| Early Nat 25 0.88 | | | | | | _ | |
| · | Hatchling survival (probability) | - | | | | | |
| Early HrM 25 0.68 | | | | | | | |
| | | Early | HrM | | 25 | 0.68 | |
| Early Sine 25 0.6 | | Early | Sine | | 25 | 0.6 | |

| | Late | Con | 25 | 0.84 | |
|------------------|-------|------|----|-------|------|
| | Late | Nat | 25 | 0.92 | |
| | Late | Hrm | 25 | 0.96 | |
| | Late | Sine | 26 | 0.92 | |
| | | | | | |
| Tail length (mm) | Early | Con | 46 | 30.00 | 2.37 |
| | Early | HrM | 51 | 29.75 | 1.71 |
| | Early | Nat | 49 | 30.58 | 1.86 |
| | Early | Sine | 52 | 30.39 | 2.05 |
| | Late | Con | 50 | 32.05 | 1.68 |
| | Late | HrM | 47 | 31.73 | 1.98 |
| | Late | Nat | 49 | 31.63 | 1.65 |
| | Late | Sine | 50 | 31.91 | 1.47 |

Con = constant; HrM = hourly means; Nat = natural

Supplemental Figures

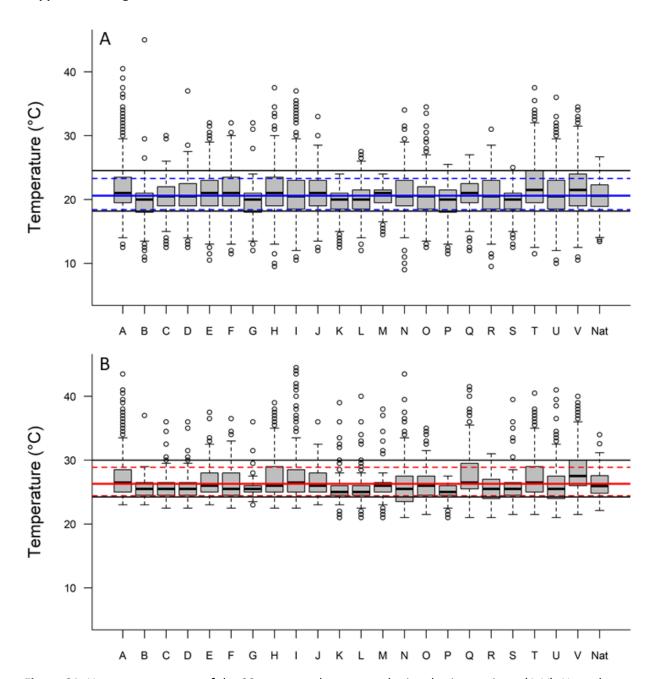


Figure S1. Nest temperatures of the 22 nests used to create the incubation regimes (A-V). Note that on the far right of each panel are the temperatures from the early (Panel A) and late (Panel B) Natural incubation treatments used in this study (i.e. "Nat"). Panel A shows temperatures collected from nests early in the season and panel B shows nest temperatures collected late in the season. Solid blue and red lines show the mean temperatures of each seasonal regime: 20.7 and 26.3 °C, respectively. Broken blue and red lines denote the mean daily maximum and minimum temperatures from the early and late season Natural incubation treatments, respectively. Solid black lines show the mean daily maximum and minimum temperatures across all 22 nests.

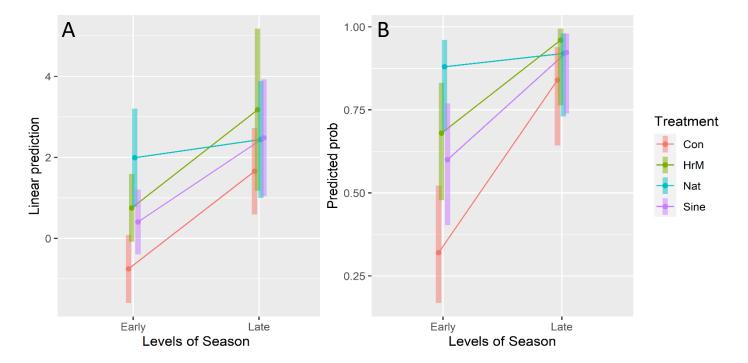


Figure S2. Potential effect of the interaction between season and treatment on hatchling survival shown on the (A) linear prediction scale and (B) response scale. Note that the response scale (B) exaggerates the differences among treatments (i.e. slopes) due to boundary issues. The statistical test is conducted on the linear prediction scale (A) and not the response scale (B). Despite the large effect size, the interaction term was not statistically significant when independently analyzed in R (by JMH; p = 0.42), SAS (by DAW; p = 0.38), and SPSS (by CJ Thawley; p = 0.43). Regardless, post-hoc inspection indicates there are important statistical differences among groups (see Figures S3, S4). Closed circles show the estimated marginal means and bars are the 95% confidence intervals (calculated with the 'emmeans' package in R).

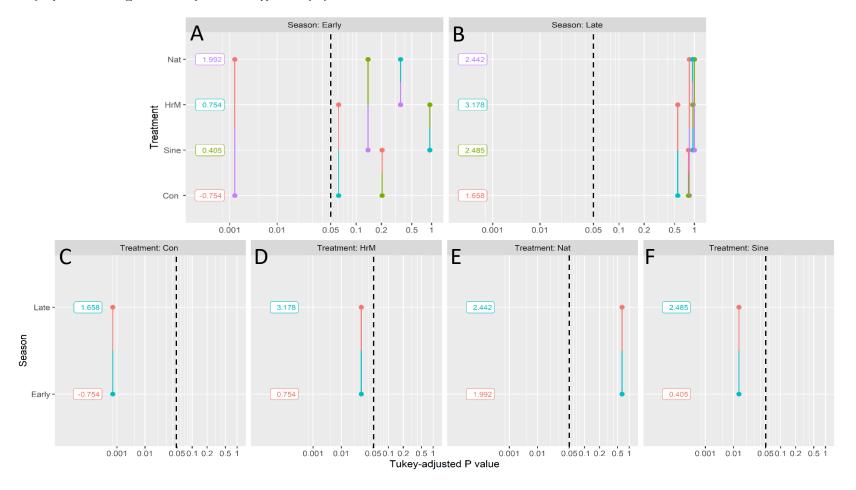


Figure S3. Tukey-adjusted p values for season contrasts of early (A) and late (B) season incubation temperatures and constant (C) hourly means (D) natural (E) and sine (F) incubation temperatures regarding hatchling survival. The vertical dotted lines denote a statistically significant p value (p = 0.05). Despite the non-significant interaction term (season by treatment); the post-hoc analysis demonstrates a significant difference between the constant and natural treatments for early season (A) but not late season (B) temperatures and a significant season effect for all treatments except the natural treatment (C-F). Vertical solid lines and closed circles denote the various contrasts. Values at the left of each panel are the estimated marginal means of the linear predictions for each treatment calculated using the 'emmeans' package in R. Con = constant; HrM = hourly means; Nat = natural