

#### Additional file 4:

**Table 1:**

Paired T-test for differences between highest response and randomly sampled calls of **satiated (i.e. 15 and 30 minutes)** nestlings. Significance level has been adjusted for multiple testing to  $\alpha=0.0025$  after Bonferroni, significant results are indicated in bold typing.

| Acoustic parameter |                             |          | Highest response<br>Mean $\pm$ SD | Random sample<br>Mean $\pm$ SD | Difference<br>t      p-value |               |
|--------------------|-----------------------------|----------|-----------------------------------|--------------------------------|------------------------------|---------------|
| Part 1             | Duration (ms)               |          | 117.3 $\pm$ 28.0                  | 122.5 $\pm$ 37.8               | -1.95                        | 0.0651        |
|                    | Amplitude (dB)              | mean     | 42.1 $\pm$ 3.5                    | 41.2 $\pm$ 3.7                 | 4.19                         | <b>0.0004</b> |
|                    | Amplitude modulation (1/ms) | variance | 0.0063 $\pm$ 0.0009               | 0.0062 $\pm$ 0.0008            | 0.57                         | 0.5774        |
|                    | Frequency (Hz)              | mean     | 7076.5 $\pm$ 544.0                | 7074.9 $\pm$ 508.4             | 0.06                         | 0.9553        |
|                    | Frequency modulation        | mean     | 27.2 $\pm$ 7.1                    | 26.8 $\pm$ 6.9                 | 1.83                         | 0.0810        |
|                    | Frequency modulation        | variance | 489.0 $\pm$ 100.4                 | 483.6 $\pm$ 89.3               | 0.91                         | 0.3716        |
|                    | Entropy                     | mean     | -3.41 $\pm$ 0.35                  | -3.44 $\pm$ 0.39               | 1.37                         | 0.1856        |
|                    | Entropy                     | variance | 0.62 $\pm$ 0.22                   | 0.59 $\pm$ 0.20                | 2.30                         | 0.0316        |
|                    | Pitch (Hz)                  | mean     | 3407.8 $\pm$ 714.1                | 3428.3 $\pm$ 672.9             | -0.50                        | 0.6222        |
|                    | Pitch goodness              | mean     | 191.3 $\pm$ 34.1                  | 183.9 $\pm$ 31.6               | 1.97                         | 0.0616        |
| Part 2             | Duration (ms)               |          | 51.1 $\pm$ 14.0                   | 49.3 $\pm$ 16.5                | 1.60                         | 0.1250        |
|                    | Amplitude (dB)              | mean     | 40.0 $\pm$ 4.5                    | 37.8 $\pm$ 4.7                 | 4.58                         | <b>0.0002</b> |
|                    | Amplitude modulation (1/ms) | variance | 0.0017 $\pm$ 0.0006               | 0.0017 $\pm$ 0.0007            | 0.04                         | 0.9665        |
|                    | Frequency (Hz)              | mean     | 5747.2 $\pm$ 448.1                | 5673.7 $\pm$ 431.1             | 1.85                         | 0.0792        |
|                    | Frequency modulation        | mean     | 41.6 $\pm$ 4.7                    | 42.8 $\pm$ 5.4                 | -1.30                        | 0.2071        |
|                    | Frequency modulation        | variance | 572.3 $\pm$ 60.3                  | 557.4 $\pm$ 80.6               | 1.13                         | 0.2724        |
|                    | Entropy                     | mean     | -3.47 $\pm$ 0.46                  | -3.45 $\pm$ 0.40               | -0.58                        | 0.5650        |
|                    | Entropy                     | variance | 0.52 $\pm$ 0.17                   | 0.51 $\pm$ 0.18                | 0.18                         | 0.8604        |
|                    | Pitch (Hz)                  | mean     | 3305.9 $\pm$ 780.8                | 3308.3 $\pm$ 749.5             | -0.05                        | 0.9603        |
|                    | Pitch goodness              | mean     | 216.2 $\pm$ 53.7                  | 206.5 $\pm$ 42.4               | 2.39                         | 0.0264        |

**Table 2:**

Paired T-test for differences between highest response and randomly sampled calls of **hungry (i.e. 105 and 120 minutes)** nestlings. Significance level has been adjusted for multiple testing to  $\alpha=0.0025$  after Bonferroni, significant results are indicated in bold typing.

| Acoustic parameter |                             |          | Highest response<br>Mean $\pm$ SD | Random sample<br>Mean $\pm$ SD | Difference<br>t      p-value |               |
|--------------------|-----------------------------|----------|-----------------------------------|--------------------------------|------------------------------|---------------|
| Part 1             | Duration (ms)               |          | 109.1 $\pm$ 20.3                  | 104.0 $\pm$ 17.6               | 2.27                         | 0.0334        |
|                    | Amplitude (dB)              | mean     | 46.0 $\pm$ 3.6                    | 45.3 $\pm$ 3.8                 | 2.37                         | 0.0271        |
|                    | Amplitude modulation (1/ms) | variance | 0.0064 $\pm$ 0.0010               | 0.0066 $\pm$ 0.0011            | -1.49                        | 0.1497        |
|                    | Frequency (Hz)              | mean     | 6659.9 $\pm$ 457.0                | 6389.9 $\pm$ 559.4             | 3.24                         | 0.0038        |
|                    | Frequency modulation        | mean     | 26.4 $\pm$ 5.3                    | 25.7 $\pm$ 5.5                 | 1.53                         | 0.1413        |
|                    | Frequency modulation        | variance | 503.0 $\pm$ 69.4                  | 495.4 $\pm$ 78.0               | 1.07                         | 0.2950        |
|                    | Entropy                     | mean     | -3.22 $\pm$ 0.47                  | -3.26 $\pm$ 0.46               | -0.10                        | 0.9202        |
|                    | Entropy                     | variance | 0.59 $\pm$ 0.27                   | 0.59 $\pm$ 0.29                | -0.03                        | 0.9789        |
|                    | Pitch (Hz)                  | mean     | 2970.7 $\pm$ 549.8                | 2913.4 $\pm$ 619.7             | 0.90                         | 0.3780        |
|                    | Pitch goodness              | mean     | 226.6 $\pm$ 52.3                  | 227.1 $\pm$ 49.6               | -0.09                        | 0.9321        |
| Part 2             | Duration (ms)               |          | 75.0 $\pm$ 22.0                   | 73.7 $\pm$ 20.5                | 1.09                         | 0.2877        |
|                    | Amplitude (dB)              | mean     | 46.3 $\pm$ 4.8                    | 45.4 $\pm$ 5.1                 | 3.83                         | <b>0.0009</b> |
|                    | Amplitude modulation (1/ms) | variance | 0.0013 $\pm$ 0.0003               | 0.0015 $\pm$ 0.0007            | -1.51                        | 0.1450        |
|                    | Frequency (Hz)              | mean     | 5638.2 $\pm$ 464.8                | 5414.6 $\pm$ 540.3             | 2.85                         | 0.0093        |
|                    | Frequency modulation        | mean     | 43.3 $\pm$ 5.4                    | 42.7 $\pm$ 4.9                 | 2.08                         | 0.0491        |
|                    | Frequency modulation        | variance | 595.8 $\pm$ 64.8                  | 581.4 $\pm$ 64.0               | 2.05                         | 0.0526        |
|                    | Entropy                     | mean     | -3.19 $\pm$ 0.57                  | -3.30 $\pm$ 0.57               | 4.12                         | <b>0.0005</b> |
|                    | Entropy                     | variance | 0.506 $\pm$ 0.153                 | 0.509 $\pm$ 0.170              | -0.17                        | 0.8692        |
|                    | Pitch (Hz)                  | mean     | 3248.5 $\pm$ 563.9                | 3178.1 $\pm$ 671.6             | 0.95                         | 0.3549        |
|                    | Pitch goodness              | mean     | 258.2 $\pm$ 56.2                  | 255.2 $\pm$ 59.8               | 0.56                         | 0.5793        |