**Supplementary Tables and Figures**

Title: Endurance rivalry and female choice jointly influence male mating success in the emerald treefrog (*Zhangixalus prasinatus*), a lek-chorusing anuran

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**Table S1 The effect of ambient temperature on call properties.**

Simple linear regression models (a-j) evaluating the effect of ambient temperature on each of the 10 call properties. *N* = 24 for all models. *P* values ≤ 0.05 are marked in bold.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Call property** | ***b* ± SE** | ***F*** | ***P*** |
| (a) | Duration | -0.009 ± 0.00 | 28.14 | **<0.001** |
| (b) | Rate | 0.011 ± 0.02 | 0.23 | 0.640 |
| (c) | Interval | -0.041 ± 0.05 | 0.71 | 0.408 |
| (d) | Rise time | -0.008 ± 0.00 | 31.31 | **<0.001** |
| (e) | Fall time | -0.000 ± 0.00 | 0.04 | 0.839 |
| (f) | Pulse number | 0.026 ± 0.06 | 0.20 | 0.657 |
| (g) | Pulse rate | 1.751 ± 0.16 | 124.94 | **<0.001** |
| (h) | Dominant frequency | 0.129 ± 7.13 | 0.00 | 0.986 |
| (j) | FM-rise | -3.459 ± 6.27 | 0.30 | 0.586 |
| (j) | FM-fall | -14.902 ± 8.55 | 3.04 | 0.095 |

**Table S2 Basic statistics of the 10 call properties.**

The mean ± SE and the range of the 10 call properties. *N* = 24.

|  |  |  |
| --- | --- | --- |
| **Call property** | **Mean ± SE** | **Range** |
| Durationadj (s) | 0.19 ± 0.01 | 0.14-0.25 |
| Rate (1/s) | 0.65 ± 0.07 | 0.23-1.70 |
| Interval (s) | 1.69 ± 0.15 | 0.42-3.53 |
| Rise timeadj (s) | 0.14 ± 0.00 | 0.10-0.18 |
| Fall time (s) | 0.05 ± 0.00 | 0.03-0.07 |
| Pulse number | 7.08 ± 0.18 | 6.00-9.00 |
| Pulse rateadj (number/s) | 38.93 ± 0.48 | 34.59-43.70 |
| Dominant frequency (Hz) | 1532.46 ± 21.98 | 1205.90-1722.70 |
| FM-rise (Hz) | 506.04 ± 19.43 | 258.65-689.00 |
| FM-fall (Hz) | -213.54 ± 28.10 | -430.70-0.00 |



**Fig. S1 Illustrations of the acoustic properties of the advertisement call of male *Z. prasinatus.***

(a) A section of the advertisement call that contains 3 types of notes: A, B and C. (b) The temporal properties of a type A note. (c) The power spectrum of a type A note showing the dominant frequency of the note (i.e., the frequency corresponding to the largest energy peak). (d) Spectrograms showing frequency modulation (FM) in a type A note: the dominant frequency was lower in the first pulse and increased to the highest in the max pulse, and rapidly decreased in the final pulse.



**Fig. S2 The setup of the semi-anechoic chamber for the two-choice playback experiments.**