Multivariate female preference tests reveal latent perceptual biases

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Supplemental Materials: 4 Figures

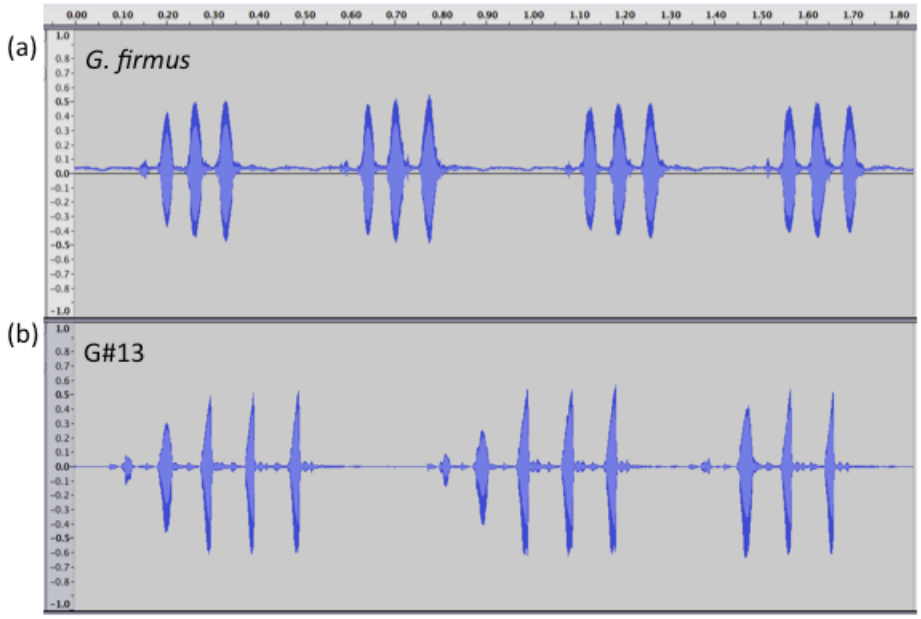

Figure S1. Waveform of representative *G. firmus* (Fig. S1A) and G#13 (Fig. S1B) songs at ~25 °C. Timescale is the same for both, ca. 1.8 seconds, and is indicated above the figure.

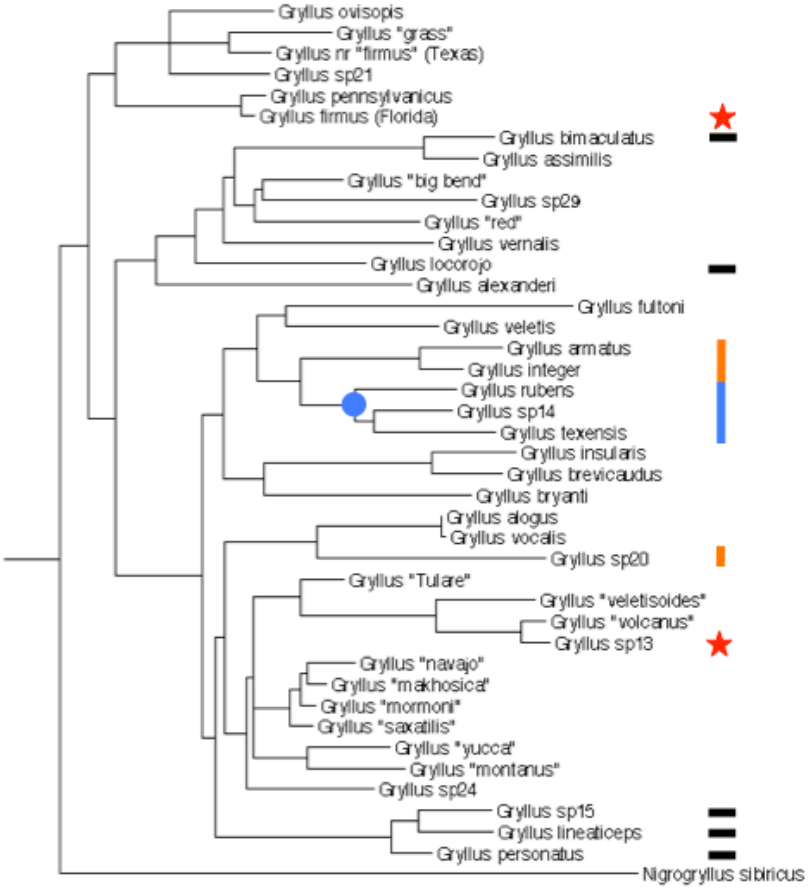

Figure S2. Preliminary phylogeny of *Gryllus* field crickets based on sequences of the nuclear *ribosomal Internal Transcribed Spacer 2* region (DA Gray, DB Weissman, JA Cole, unpublished). All of the species shown are chirping species, except *G. texensis*, *G. rubens*, and *G.* sp14, which are true trilling species [indicated by a blue bar (tips) and a blue dot (shared ancestral node)], and *G. armatus*, *G. integer*, and *G.* sp20 (indicated by orange bars) which are described as having "stutter-trills" – essentially chirps concatenated into trills. The phylogenetic distribution of male chirps and trills suggests that chirps are ancestral within *Gryllus*. The phylogenetic distribution of female responses to chirps and trills is much less densely sampled, precluding a definitive analysis, but of 7 chirping species tested, 5 do not respond well to trills (indicated by horizontal black bars), whereas the two species studied here (indicated with red stars) do respond strongly to trills.

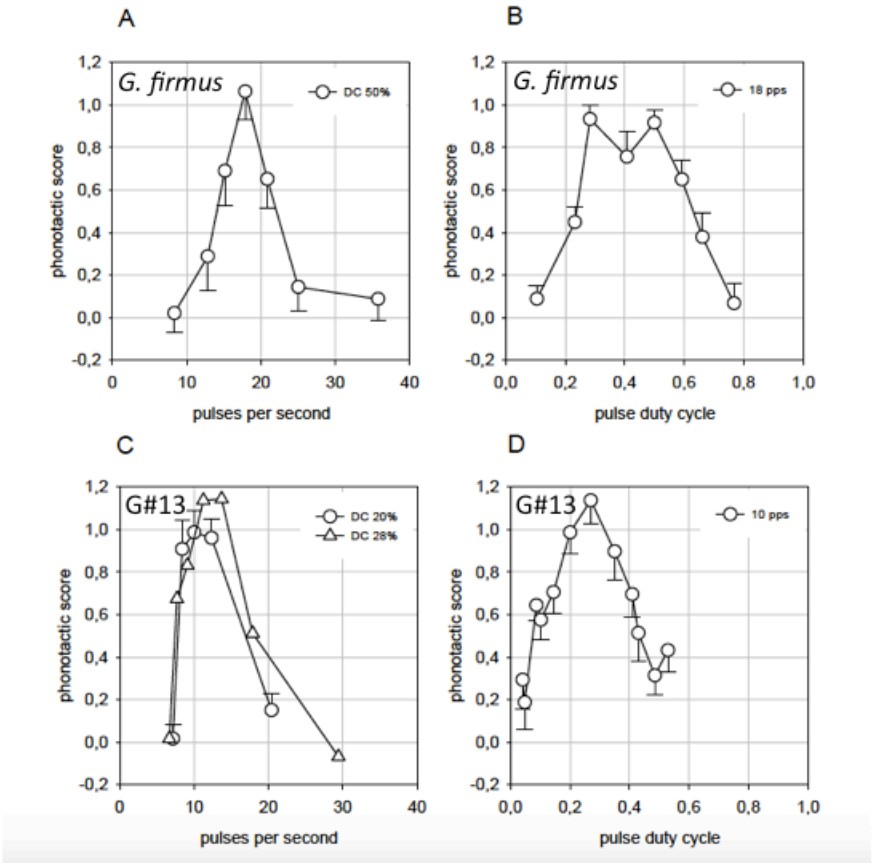

Figure S3. Pulse profiles presented as univariate preference functions for pulse rate (Fig. S3A,C) and pulse duty cycle (Fig. S3B,D) for *G. firmus* (A,B) and G#13 (C,D).

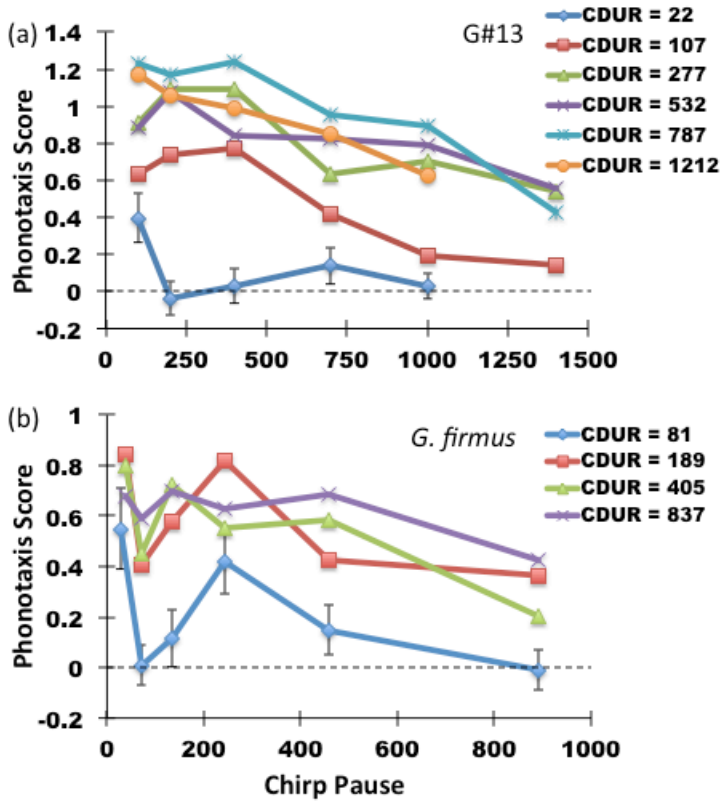

Figure S4. Decomposition of Figs. 3B,D into univariate preference functions showing independent effects of chirp duration (CDUR) and chirp pause for G#13 (Fig. S4A) and *G. firmus* (Fig. S4B). Longer chirp durations and shorter chirp pauses both increase female response.