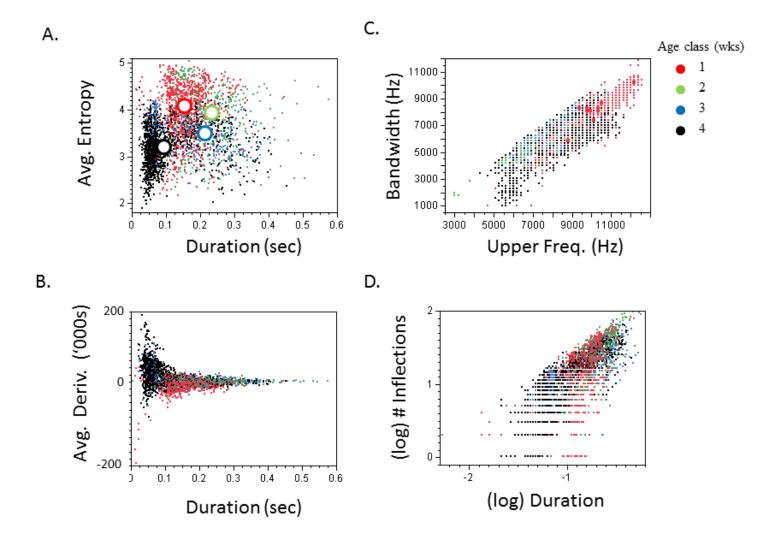


(Weeks Post-hatch)

**Fig. S1.** Means of eight spectrographic measurements of 2517 calls from 20 nestling green-rumped parrotlets sampled at weekly intervals throughout the nestling period. Connecting line color and unique symbols represent individual nestlings. Horizontal lines connect age classes whose pooled means are significantly different from each other (Tukey–Kramer highly significant difference). \*P<0.05, \*\*P<0.001.



**Fig. S2.** Relationships between different spectrographic attributes of 2517 calls of 20 nestling green-rumped parrotlets and color-coded for the four weeks of development. (A) Duration *versus* average entropy revealed significant clustering of age groups; development was characterized by increasingly lower entropy, and calls from the fourth week clustered along low entropy values and short durations. (B) Duration *versus* average derivative indicates that the fourth week has a higher derivative, as well as a potential tradeoff between durations over which modulation of the carrier frequency is constrained; increasingly longer durations show diminishing marginal departure either way from neutral derivative scores. (C) Bandwidth was mainly achieved by increasing upper frequencies as opposed to reducing lower frequencies. (D) Duration showed a positive log-linear relationship with the number of inflections.