



Figure 1 | Annotating large datasets of birdsong is a hard task

a. The zebra finch repeating motif allows annotation by matching its template sonogram.

b. Bengalese finch songs segmented to syllables.

c. One domestic canary song of median duration segmented to phrases.

d. Example of two consecutive canary phrases that differ mostly in inter-syllable gaps. These two elements necessitate combining the segmentation and annotation steps

e. The median, 0.15 and 0.75 quantiles of song durations (x-axis) and # of syllables per song (y-axis) for 2 canary strains, Bengalese finches and Zebra finches (color coded)

f. Variable songs are not suited for template matching. Songs contain repeating sequences of syllables but because of sequence variability songs with more syllables (x-axis) share smaller sequence fractions (y-axis)

g. Distributions of syllable durations for one domestic canary. The bird had 29 different syllable types (x-axis, ordered by mean syllable duration). Box plot shows median, 0.15 and 0.75 quantiles of syllable durations. Whiskers show the entire range