

**Figure S1:** Examples of acceleration data. Shown are four 15 s-bursts (recorded once a minute continuously). X-axis: time, y-axis: acceleration ( $\text{m/s}^2$ ). a) flying – magnified inset shows oscillating acceleration on z-axis, which corresponds to wing beats; b) resting; c) moving; d) moving, specifically scratching; note that orientation (i.e. which axis is shifted by 1 g) is different from a) because bat is hanging upside down as opposed to horizontally flying.

