Table S1. Summary of ANCOVA analyses of kinematic variables in response to loading and speed.

Variable	Bat1			Bat2			Bat3		
	effect[1]	slope[2]	elevation[3]	effect	slope	elevation	effect	slope	elevation
Frequency (Hz)	↑	$F_{1,19}=3.07$	$F_{1,19}=14.17$**	↓	$F_{1,23}=22.4$***	TQT***	↑	$F_{1,28}=1.81$	$F_{1,28}=19.8$***
Amplitude (deg)	↓	$F_{1,19}=0.21$	$F_{1,19}=14.1$**	↓	$F_{1,21}=11.4$**	TQT*		$F_{1,26}=2.80$	$F_{1,26}=3.55$
Stroke plane angle (deg)		$F_{1,20}=0.005$	$F_{1,20}=0.70$		$F_{1,23}=0.009$	$F_{1,23}=0.49$	↓	$F_{1,31}=0.31$	$F_{1,31}=10.8$**
Camber (m^{-1})	↑	$F_{1,7}=2.14$	$F_{1,7}=11.7$*	↑	$F_{1,11}=2.92$	$F_{1,11}=90.3$***		$F_{1,13}=0.53$	$F_{1,13}=0.14$
Proximal AoA (deg)		$F_{1,6}=4.2$	$F_{1,6}=0.82$		$F_{1,14}=0.0007$	$F_{1,14}=4.10$		$F_{1,13}=1.60$	$F_{1,13}=3.61$
Proximal AoA (deg)		$F_{1,6}=5.06$	$F_{1,6}=0.21$		$F_{1,14}=0.004$	$F_{1,14}=0.64$		$F_{1,13}=0.37$	$F_{1,13}=3.44$
Elbow extension (deg)	↑	$F_{1,6}=0.37$	$F_{1,6}=222.4$***	↑	$F_{1,12}=2.42$	$F_{1,12}=115.5$***	↑	$F_{1,12}=0.04$	$F_{1,12}=15.8$**
Wrist extension (deg)	↑	$F_{1,6}=0.69$	$F_{1,6}=26.1$**	↑	$F_{1,12}=5.70$*	TQT*	↑	$F_{1,12}=0.36$	$F_{1,12}=24.0$***
Wing area (m^2)		$F_{1,7}=2.66$	$F_{1,7}=3.08$	↑	$F_{1,12}=0.63$	$F_{1,12}=294.6$***		$F_{1,13}=0.72$	$F_{1,13}=4.04$
C_v			TQT	↑		TQT*			TQT

[1]Effect represents the positive (↑) or negative (↓) change of a variable in response to loading.

[2]The equality of slope was determined by the interaction effect of 'loading' and 'speed' effects in an ANCOVA analysis.

[3]The elevation effect reflects the effect of the loading treatment over a variable and it was determined by ANCOVA analysis. If the slopes were different between unloaded and loaded treatments, significance was tested by a Tsutakawa's Quick test (TQT).

Statistical significance: *$P<0.05$, **$P<0.01$, ***$P<0.001$