

Supporting Information

Table S1. – Species-specific data on 213 bird species regarding wing morphology (wing span, wing area, wing aspect ratio), flight type (1 – continuous flapping; 2a – flapping and soaring; 2b – flapping and gliding; 3 – passerine type, following categorization by Bruderer et al. 2010), migration distance, body mass (maximum, mean and sample size for males and females separately, as well as data source), and result of log-log linear regressions between body mass and wing length in 45 species of birds captured in the Danube-Delta Biosphere reserve (sample size (n), slope and associated standard error, p value and the 95th quantile of the residuals).

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Table S2. – Results of the model comparisons based on Akaike's Information Criteria for small sample sizes (AICc). For each possible model formula we present AICc, degree of freedom (df), number of parameters estimated (k), difference of AICc value from the smallest in the model set (Δ_{AICc}) and Akaike weights (ω_i).

Dependent	Formula	AICc	df	k	Δ_{AICc}	ω_i
Fuel factor	Migration distance + Wing aspect ratio + Flight type	-283.08	207	6	0.00	0.98
Fuel factor	Migration distance + Flight type+ Body mass	-275.62	207	6	7.46	0.02
Fuel factor	Migration distance + Flight type	-269.48	208	5	13.60	0.00
Fuel factor	Migration distance + Wing loading+ Flight type	-262.14	207	6	20.94	0.00
Fuel factor	Migration distance + Wing aspect ratio	-260.70	210	3	22.38	0.00
Fuel factor	Migration distance + Wing aspect ratio + Wing loading	-259.01	209	4	24.07	0.00
Fuel factor	Migration distance + Wing aspect ratio + Body mass	-258.84	209	4	24.24	0.00
Fuel factor	Flight type+ Body mass	-258.46	208	5	24.62	0.00
Fuel factor	Migration distance + Wing loading	-256.99	210	3	26.09	0.00
Fuel factor	Migration distance + Wing aspect ratio + Wing loading+ Body mass	-256.92	208	5	26.15	0.00
Fuel factor	Migration distance + Body mass	-256.66	210	3	26.42	0.00
Fuel factor	Migration distance	-256.41	211	2	26.67	0.00
Fuel factor	Migration distance + Wing loading+ Body mass	-255.24	209	4	27.84	0.00
Fuel factor	Migration distance + Wing aspect ratio + Wing loading+ Flight type	-255.07	206	7	28.00	0.00
Fuel factor	Migration distance + Wing aspect ratio + Flight type+ Body mass	-254.85	206	7	28.22	0.00
Fuel factor	Migration distance + Wing aspect ratio + Wing loading+ Flight type+ Body mass	-252.99	205	8	30.08	0.00
Fuel factor	Wing aspect ratio + Flight type+ Body mass	-252.82	207	6	30.26	0.00
Fuel factor	Wing aspect ratio + Wing loading+ Flight type+ Body mass	-251.31	206	7	31.76	0.00
Fuel factor	Migration distance + Wing loading+ Flight type+ Body mass	-251.19	206	7	31.88	0.00
Fuel factor	Wing loading	-248.87	211	2	34.21	0.00
Fuel factor	Body mass	-248.42	211	2	34.66	0.00
Fuel factor	Wing loading+ Body mass	-247.55	210	3	35.53	0.00
Fuel factor	Wing aspect ratio + Wing loading	-246.87	210	3	36.21	0.00
Fuel factor	Wing aspect ratio + Body mass	-246.41	210	3	36.67	0.00
Fuel factor	Wing loading+ Flight type	-245.93	208	5	37.14	0.00
Fuel factor	<i>Intercept</i>	-245.55	212	1	37.53	0.00
Fuel factor	Wing aspect ratio + Wing loading+ Body mass	-245.48	209	4	37.59	0.00
Fuel factor	Wing loading+ Flight type+ Body mass	-244.29	207	6	38.79	0.00
Fuel factor	Wing aspect ratio	-244.24	211	2	38.84	0.00
Fuel factor	Wing aspect ratio + Wing loading+ Flight type	-243.86	207	6	39.21	0.00
Fuel factor	Flight type	-240.87	209	4	42.20	0.00
Fuel factor	Wing aspect ratio + Flight type	-239.43	208	5	43.64	0.00

Figure S1. – Correlation between fat score and individual body condition in 26 bird species captured at the bird ringing station in the Danube–Delta Biosphere Reserve. Slopes and p values (shown in the upper left corner of each graph) were extracted from a linear regression between the two plotted variables.

