

Table S7. Mean route and seed dispersal distances (m) for the five study species by movement method; standard error of the mean is presented within parentheses. Thirty experiments per species per movement method. These experiments use *T. migratorius* physiological parameters (main text, Table 1) for all bird species.

Species	Permeability			Straight path		
	Route Dist. (m)		U	Disp. Dist. (m)		U
<i>C. cristata</i>	287.1 (39.04) a	263.4 (32.89) a	486	240.1 (28.59) a	244.4 (29.96) a	452
<i>M. erythrocephalus</i>	268 (45.31) a	203.7 (27.38) a	499	219.6 (35.18) ab	188.2 (24.99) a	469
<i>S. sialis</i>	238.6 (38.41) a	309.6 (67.02) a	398	178.7 (26.47) ab	252.8 (48.58) a	371
<i>T. migratorius</i>	204.8 (37.97) a	182.1 (27.55) a	481	144.4 (20.48) b	163.2 (19.92) a	407
<i>V. griseus</i>	342.7 (62.3) a	241.2 (51.11) a	510	239.7 (39.59) ab	240.2 (50.7) a	465

Results of Wilcoxon–Mann–Whitney tests (U) comparing Movement or Dispersal Distance between landscape permeability and straight path movement experiments for each bird species (*** P<0.001, ** P<0.01, * P<0.05).

Movement and Dispersal Distance (m) are presented as the mean value with standard error of the mean in parentheses. Different letters within movement methods represent species' differences using Dunn's Test post hoc comparisons ($\alpha = 0.05$) on Kruskal–Wallis analysis of the given variable between species.