

Supplemental Material

Development of the Navigational Map in Homing Pigeons: Differences between Pigeons of different Age

Ingo Schiffner, Roswitha Wiltschko (i.schiffner@uq.edu.au)

Table S1. Comparing the behavior of the three age groups during the homing flight

Variable	Juveniles	Yearlings	Old birds	Difference Yearlings/Old significant?
	median	median	median	
Sites involved	4	11	11	
Number PoDs.	2.2	1.5	1.7	25.0
Time to 1 st PoD (s)	240	142.5	105	26.5
Distance (m)	299	491	552	6.31
<i>Initial Phase</i>				
Δ home	18°	30°	33°	26.5
Vector length	0.33	0.66	0.63	26.0
Steadiness	0.21	0.30	0.33	26.0
Flying speed (km/h)	50	53	51	5.0**
<i>Departure Phase</i>				
Δ home	-15°	71°	27°	16.0
Vector length	0.62	0.70	0.90	15.0
Steadiness	0.66	0.80	0.85	14.5
Flying speed (km/h)	57	62	57	3.5**
<i>Final Homing Phase</i>				
Δ home	19°	13°	3°	0.0**
Vector length	0.81	0.98	0.99	17.5
Steadiness	0.70	0.82	0.85	16.5
Flying speed (km/h)	57	61	56	5.5

PoD, Point of decision; Δ home, angular deviation of the mean heading from the home direction; vector length, length of the mean vector based on the headings. **, P < 0.01

Supplemental Material

Development of the Navigational Map in Homing Pigeons: Differences between Pigeons of different Age

Ingo Schiffner, Roswitha Wiltschko (i.schiffner@uq.edu.au)

Table S2. Results of two way ANOVA for the short-term correlation dimension

Site	Age of pigeons			Distance from home			Interactions		
	Df	F-Values	Sign?	Df	F-Values	Sign?	Df	F-Values	Sign?
CP	2	0.909	n.s.	11	12.702	***	13	0.963	n.s.
GT	2	21.143	***	18	6.460	***	22	0.473	n.s.
EP	2	7.895	***	35	9.765	***	29	1.298	n.s.
NI	1	21.916	***	26	10.911	***	18	0.428	n.s.
MT	1	4.577	*	28	3.842	***	24	0.590	n.s.
OB	1	10.762	**	25	4.606	***	24	0.285	n.s.
HO	2	5.866	***	56	5.136	***	60	1.016	n.s.
HOF	1	34.719	***	33	4.062	***	28	0.616	n.s.
AH	1	7.620	**	30	2.277	***	30	0.123	n.s.
RB	1	2.548	n.s.	39	2.517	***	38	0.749	n.s.
RAV	1	0.241	n.s.	49	5.254	***	48	0.486	n.s.

Df, degrees of freedom; significance levels: n.s, not significant; *, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.