

Table S1.A. Multiple linear regression models for point counts

Schooling: sqrt(bias) ~ radius * rot_speed * time

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	1.8511476	0.3378799	5.479	5.43e-08	***
radius	-0.2716336	0.0919593	-2.954	0.00321	**
rot_speed	0.0353690	0.0509373	0.694	0.48762	
time	0.3349372	0.0447533	7.484	1.59e-13	***
radius:rot_speed	0.0093044	0.0138634	0.671	0.50228	
radius:time	-0.0272708	0.0121803	-2.239	0.02538	*
rot_speed:time	0.0095302	0.0067468	1.413	0.15810	
radius:rot_speed:time	-0.0009021	0.0018362	-0.491	0.62334	

Residual standard error: 0.5194 on 992 degrees of freedom
 Multiple R-squared: 0.7853, Adjusted R-squared: 0.7838
 F-statistic: 518.4 on 7 and 992 DF, p-value: < 2.2e-16

Cryptic: sqrt(bias) ~ log(radius) * rot_speed * time

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-0.3673595	0.2414430	-1.522	0.1284	
log(radius)	0.9308536	0.1939395	4.800	1.83e-06	***
rot_speed	0.0619799	0.0363989	1.703	0.0889	.
time	0.1561368	0.0319799	4.882	1.22e-06	***
log(radius):rot_speed	-0.0508950	0.0292375	-1.741	0.0820	.
log(radius):time	-0.1237475	0.0256879	-4.817	1.68e-06	***
rot_speed:time	0.0014740	0.0048212	0.306	0.7599	
log(radius):rot_speed:time	-0.0008057	0.0038726	-0.208	0.8352	

Residual standard error: 0.3356 on 992 degrees of freedom
 Multiple R-squared: 0.2035, Adjusted R-squared: 0.1979
 F-statistic: 36.21 on 7 and 992 DF, p-value: < 2.2e-16

Shy: bias ~ radius * rot_speed * time

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	0.657394	1.460111	0.450	0.6527	
radius	-0.360010	0.357653	-1.007	0.3145	
rot_speed	-0.223403	0.220120	-1.015	0.3105	
time	1.480154	0.193396	7.653	6.09e-14	***
radius:rot_speed	0.058169	0.053918	1.079	0.2810	
radius:time	-0.085590	0.047372	-1.807	0.0712	.
rot_speed:time	-0.073919	0.029156	-2.535	0.0114	*
radius:rot_speed:time	0.034602	0.007142	4.845	1.54e-06	***

Residual standard error: 1.278 on 742 degrees of freedom
 Multiple R-squared: 0.9306, Adjusted R-squared: 0.9299
 F-statistic: 1421 on 7 and 742 DF, p-value: < 2.2e-16

Bold: log(bias) ~ radius * rot_speed * time

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	3.406e+00	1.146e-01	29.718	<2e-16	***
radius	-4.937e-01	3.119e-02	-15.828	<2e-16	***
rot_speed	1.037e-02	1.728e-02	0.600	0.5486	
time	1.570e-01	1.518e-02	10.340	<2e-16	***
radius:rot_speed	1.091e-02	4.702e-03	2.320	0.0205	*
radius:time	4.124e-03	4.132e-03	0.998	0.3184	
rot_speed:time	-2.807e-05	2.288e-03	-0.012	0.9902	
radius:rot_speed:time	-1.102e-04	6.228e-04	-0.177	0.8596	

Residual standard error: 0.1762 on 992 degrees of freedom
 Multiple R-squared: 0.936, Adjusted R-squared: 0.9355
 F-statistic: 2072 on 7 and 992 DF, p-value: < 2.2e-16

Table S1.B Multiple linear regression models for transects

Schooling: sqrt(bias) ~ distance * width * speed

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	2.736e+00	1.232e-01	22.205	< 2e-16	***
distance	5.713e-03	3.714e-03	1.538	0.124	
width	-2.067e-01	3.714e-02	-5.564	3.23e-08	***
speed	-1.730e-01	1.857e-02	-9.314	< 2e-16	***
distance:width	-4.379e-04	1.120e-03	-0.391	0.696	
distance:speed	-4.962e-05	5.600e-04	-0.089	0.929	
width:speed	8.706e-03	5.600e-03	1.555	0.120	
distance:width:speed	-3.553e-05	1.688e-04	-0.210	0.833	

Residual standard error: 0.3377 on 1242 degrees of freedom
 Multiple R-squared: 0.6862, Adjusted R-squared: 0.6845
 F-statistic: 388.1 on 7 and 1242 DF, p-value: < 2.2e-16

Cryptic: bias ~ distance * width * speed

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	3.586e-01	6.494e-02	5.522	4.08e-08	***
distance	-8.771e-03	1.958e-03	-4.480	8.15e-06	***
width	8.078e-03	1.958e-02	0.413	0.67999	
speed	-4.248e-03	9.789e-03	-0.434	0.66442	
distance:width	2.510e-03	5.903e-04	4.252	2.28e-05	***
distance:speed	6.965e-04	2.952e-04	2.360	0.01843	*
width:speed	8.573e-03	2.952e-03	2.904	0.00374	**
distance:width:speed	-1.986e-04	8.899e-05	-2.231	0.02583	*

Residual standard error: 0.178 on 1242 degrees of freedom
 Multiple R-squared: 0.4472, Adjusted R-squared: 0.444
 F-statistic: 143.5 on 7 and 1242 DF, p-value: < 2.2e-16

Shy: sqrt(bias) ~ distance * width * speed

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	3.5797120	0.1149468	31.142	< 2e-16	***
distance	0.0191442	0.0034658	5.524	4.04e-08	***
width	-0.3398881	0.0346578	-9.807	< 2e-16	***
speed	-0.2095855	0.0173289	-12.095	< 2e-16	***
distance:width	-0.0020290	0.0010450	-1.942	0.0524	.
distance:speed	-0.0010842	0.0005225	-2.075	0.0382	*
width:speed	0.0104006	0.0052249	1.991	0.0467	*
distance:width:speed	0.0002315	0.0001575	1.470	0.1419	

Residual standard error: 0.3151 on 1242 degrees of freedom
 Multiple R-squared: 0.8334, Adjusted R-squared: 0.8325
 F-statistic: 887.6 on 7 and 1242 DF, p-value: < 2.2e-16

Bold: log(bias) ~ log(distance) * log(width) * log(speed)

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	4.016008	0.158439	25.347	< 2e-16	***
log(distance)	0.126352	0.047877	2.639	0.008418	**
log(width)	-0.428782	0.142288	-3.013	0.002635	**
log(speed)	-1.113838	0.090756	-12.273	< 2e-16	***
log(distance):log(width)	-0.088245	0.042997	-2.052	0.040345	*
log(distance):log(speed)	0.002144	0.027425	0.078	0.937713	
log(width):log(speed)	-0.303767	0.081504	-3.727	0.000202	***
log(distance):log(width):log(speed)	0.067181	0.024629	2.728	0.006467	**

Residual standard error: 0.1599 on 1242 degrees of freedom
 Multiple R-squared: 0.9651, Adjusted R-squared: 0.9649
 F-statistic: 4900 on 7 and 1242 DF, p-value: < 2.2e-16