

Wildlife Biology

**WLB-00680**

Tarakini, T., Mabika, I., Dakwa, F., Mundy, P. and Fritz, H. 2020. Terrestrial threats dominate the waterbird landscape of fear in a savannah pan wetland system. – Wildlife Biology 2020: wlb.00680

Appendix 1–2

Appendix 1. The probabilities (with confidence intervals) of waterbird reactions worked from binomial regressions for the overall, mild and escape responses models. In the original activity category, F.nV= feeding not allowing vigilance, F.V=Feeding allowing vigilance, nF.nV=non-feeding not allowing vigilance and nF.V=non-feeding allowing vigilance. The superscripts denotations column-wise shows differences in original activity modalities (letters), guilds (numeric) and disturbance type (enclosed numerical).

Variable	Modality	Overall responses		Mild responses		Extreme responses	
		Probability (CI)	p value	Probability (CI)	p value	Probability (CI)	p value
Original activity	F.nV	0.492(0.352-0.634)	0.957	0.241(0.115-0.437)	0.199	0.171(0.100-0.278)	0.011
	F.V	0.375(0.261-0.505)	0.366	0.100 (0.046 -0.208)	0.343	0.078(0.044-0.136)	0.398
	nF.nV	0.583(0.453-0.702)	0.484	0.294(0.155-0.486)	0.541	0.146(0.085-0.240)	0.762
	nF.V	0.951(0.920-0.971) <sup>a</sup>	<0.0001	0.694(0.495-0.840) <sup>a</sup>	0.009	0.773(0.651-0.861) <sup>a</sup>	<0.0001
Guild	Generalist	0.430(0.353-0.511)	0.441	0.107(0.064-0.172)	0.172	0.329(0.261-0.404) <sup>i</sup>	0.0002
	Large wildfowl	0.371(0.308-0.439)	0.079	0.189(0.135-0.258)	0.846	0.183(0.144-0.231)	0.115
	Small wildfowl	0.213(0.172-0.260) <sup>i</sup>	<0.0001	0.033(0.021-0.052) <sup>i</sup>	<0.0001	0.171(0.100-0.278)	0.011
	Waders	0.492(0.352-0.634)	0.957	0.241(0.115-0.437)	0.199	0.353(0.293-0.418) <sup>i</sup>	<0.0001
Disturbance type	Aerial	0.492(0.352-0.634)	0.957	0.241(0.115-0.437)	0.199	0.171(0.100-0.278)	0.011
	Terrestrial	0.878(0.841-0.908) <sup>(1)</sup>	<0.0001	0.471(0.351-0.595) <sup>(1)</sup>	0.011	0.557(0.475-0.637) <sup>(1)</sup>	<0.0001
	Herbivores	0.432(0.376-0.490)	0.297	0.136(0.097-0.188)	0.226	0.116(0.092-0.146)	0.757

Appendix 2. Model outputs for factors that determined time spent flying (Model 1) and for the responses when waterbirds were originally disturbed by people or not (Model 2). Rows with dashes (-) are cases with insufficient observations.

Model	Variable	Estimate	SE	Z-value	Pr(> z )
Model 1	Intercept	3.055	0.168	18.185	<0.0001
	Terrestrial disturbance	-0.005	0.053	-0.092	0.927
	Herbivore disturbance	-1.072	0.105	-10.172	<0.0001
	Generalist	0.259	0.146	1.771	0.077
	Large wildfowl	1.256	0.122	10.301	<0.0001
	Small wildfowl	0.495	0.068	7.287	<0.0001
	Land use: HNP	-0.280	0.183	-1.527	0.127
	Generalist x Terrestrial	-0.854	0.124	-6.882	<0.0001
	Generalist x Herbivores	-0.127	0.183	-0.696	0.487
	Large Wildfowl x Terrestrial	1.467	0.119	12.346	<0.0001
	Large wildfowl x Herbivores	0.385	0.188	2.050	0.040
	Small wildfowl x Terrestrial	0.537	0.067	8.014	<0.0001
	Small wildfowl x Herbivores	1.304	0.117	11.165	<0.0001
	Land use HNP: Generalist	0.114	0.152	0.752	0.452
	Land use HNP : Large wildfowl	-0.484	0.133	-3.645	0.0003
	Land use HNP : Small wildfowl	-0.607	0.072	-8.423	<0.0001
Model 2	Intercept	3.017	0.331	9.115	<0.0001
	Land use: HNP	-0.928	0.344	-2.694	0.007
	People disturbance (Yes)	1.299	0.137	9.518	<0.0001
	Generalists	0.169	0.224	0.756	0.450
	Large wildfowl	2.844	0.141	20.117	<0.0001
	Small wildfowl	0.858	0.128	6.727	<0.0001
	People disturbance(Yes) × Generalist	-1.089	0.275	-3.956	<0.0001

People disturbance(Yes) × Large wildfowl	-	-	-	-
People disturbance(Yes) × Small wildfowl	-1.057	0.151	-7.008	<0.0001

---