SUPPLEMENTAL DATA 2

Statistics related to the best Generalized Linear Mixed Models (GLMMs) for predicting the foraging behavioral plasticity of Chilean Flamingos at the Barra of the Lagoa do Peixe National Park, southern Brazil, during the study, using different combinations of environmental variables as predictors, for the four foraging behaviors observed (a – relative frequency and b – mean duration), for the strolling mean duration (c) and the mean individual distance in within the flock (d). K = the number of parameters estimated plus intercept; AIC = Akaike's Information Criterion score; wi = AIC weights; z-value = statistic score; N = the number of observations; Var = Variance; SD = standard deviation; SE = standard error; *** = P-value lesser than 0.001; ** = P-value lesser than 0.05. PU = Pecking-up; HD = Head-dipping; FT = Feet-trembling; DR = Dredging; ST = Strolling; RE = Random effects.

(a) Relative behavioral frequency

Model				
PU Frequency ~ Low calorie food abundance + water depth + (RE: Months)				
Random effects		N	Var	SD
Month		91	7.389	2.711
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	2.5606	0.795	3.220	***
Low calorie food abundance	1.0717	0.606	1.623	***
Water depth	- 0.8562	0.272	- 3.167	**

Model
HD Frequency ~ Low calorie food abundance + water depth + (RE: Months)

Random effects		N	Var	SD
Month		91	8.135	12.967
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	1.67227	0.750	2.229	***
Low calorie food abundance	1.60836	0.854	1.903	**
Water depth	- 0.92871	0.304	- 3.054	**

Model

FT Frequency ~ High calorie food abundance + water depth + (RE: Months)

Random effects		N	Var	SD
Month		91	7.051	14.05
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	4.65401	0.816	5.703	***
High calorie food abundance	0.76890	0.120	6.407	**
Water depth	2.49892	0.425	5.879	0.057

Model

DR Frequency ~ High calorie food abundance + water depth + (RE: Months)

Random effects		N	Var	SD
Month		91	6.790	5.176
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	3.73110	1.071	3.483	**
High calorie food abundance	0.88476	0.272	3.252	***
Water depth	0.97421	0.123	7.920	**

(b) Behavioral mean duration

Model				
PU Mean Duartion ~ Low calorie food abundance + water depth + (RE: Months)				
Random effects		N	Var	SD
Month		91	2.877	1.696
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	1.20712	0.773	1.561	***
Low calorie food abundance	0.82465	0.237	3.479	**
Water depth	- 0.98731	0.280	- 3.526	**

Model				
HD Mean Duration ~ Low calorie food abundance + water depth + (RE: Months)				
Random effects		N	Var	SD
Month		91	9.092	7.687
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	2.6385	1.169	2.257	**
Low calorie food abundance	0.5778	0.231	2.501	**
Water depth	- 0.9108	0.506	- 1.802	**

Model				
FT Mean Duration ~ High calorie food abundance + water depth + temperature + pluviosity + (RE: Months)				
Random effects		N	Var	SD
Month		91	14.81	12.17
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	3.5203	2.493	1.412	**
High calorie food abundance	- 0.1711	0.082	- 2.086	***
Water depth	- 0.2424	0.091	- 2.663	**
Temperature	0.5665	0.431	1.314	**
Pluviosity	- 0.3886	0.314	- 1.237	***

Model				
DR Mean Duration ~ High calorie food abundance + water depth + temperature + pluviosity + (RE: Months)				
Random effects		N	Var	SD
Month		91	16.342	6.081
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	2.5643	1.908	1.343	**
High calorie food abundance	- 0.2543	0.066	- 3.853	***
Water depth	- 0.3753	0.132	- 2.843	**
Temperature	0.2186	0.025	8.744	**
Pluviosity	- 0.1561	0.034	- 4.591	**

(c) Strolling mean duration

Model				
ST Mean Duration ~ High calorie food abundance + Low calorie food abundance + temperature + pluviosity + (RE: Months)				
Random effects		N	Var	SD
Month		91	16.743	2.945
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	3.3201	8.943	0.371	***
Low calorie food abundance	- 5.2742	8.626	- 0.611	***
High calorie food abundance	9.3461	3.397	2.750	**
Temperature	2.6738	1.706	1.567	***
Pluviosity	- 1.9912	3.617	- 0.550	**

(d) Mean individual distance

Model				
Mean Distance ~ Flock size + High calorie food abundance + Low calorie food abundance + (RE: Months)				
Random effects		N	Var	SD
Month		91	11.210	3.348
Fixed effects	Estimative	SE	z-value	*P*-value
Intercept	2.9281	5.378	0.544	0.588
Low calorie food abundance	- 2.4092	1.147	- 2.104	**
High calorie food abundance	5.3089	2.481	2.139	**
Flock size	0.5909	0.192	3.077	**