

Appendix 1 - Candidate linear models of adult plumage color, oxidative stress and reproductive success in relation to concentrations of metals in feces of chicks of Tree Swallows.

Table A1.1

Candidate linear models of adult plumage hue in relation to fecal metals of Tree Swallow chicks.

Predictors	logL	AICc	Δ AICc	wi
PC2 _{MET} + Sex	-204.13	417.2	0.00	0.241
PC2 _{met}	-205.51	417.6	0.38	0.199
Sex	-205.97	418.5	1.30	0.125
PC1 _{MET} + PC2 _{MET}	-205.14	419.2	2.02	0.088
PC2 _{MET} * Sex	-203.98	419.4	2.18	0.081
PC1 _{MET} * Sex + PC2 _{MET}	-202.96	419.9	2.74	0.061
Intercept only	-207.89	420.0	2.87	0.057
PC1 _{MET} + Sex	-205.90	420.7	3.53	0.041
PC1 _{MET} * Sex	-204.72	420.8	3.67	0.038
PC2 _{MET} * Sex + PC1 _{MET}	-203.75	421.5	4.32	0.028
PC1 _{MET}	-207.68	421.9	4.71	0.023
PC1 _{MET} * Sex + PC2 _{MET} * Sex	-202.85	422.4	5.26	0.017

logL, log-likelihood; AICc, size-corrected Akaike information criterion; Δ AICc, difference in AICc value with highest supported model; w_i , Akaike weight.

Table A1.2

Candidate linear models of adult plumage saturation in relation to fecal metals of Tree Swallow chicks.

Predictors	logL	AICc	Δ AICc	wi
Intercept only	-165.39	335.1	0.00	0.309
PC1 _{MET}	-164.86	336.3	1.21	0.169
PC2 _{MET}	-165.05	336.6	1.58	0.140
Sex	-165.26	337.0	1.99	0.114
PC1 _{MET} + PC2 _{MET}	-164.57	338.0	3.00	0.069
PC1 _{MET} + Sex	-164.62	338.1	3.10	0.066
PC2 _{MET} + Sex	-164.97	338.9	3.81	0.046
PC1 _{MET} * Sex	-163.89	339.2	4.12	0.039
PC2 _{MET} * Sex	-164.45	340.3	5.25	0.022
PC1 _{MET} * Sex + PC2 _{MET}	-163.74	341.5	6.43	0.012
PC2 _{MET} * Sex + PC1 _{MET}	-163.99	342.0	6.95	0.010
PC1 _{MET} * Sex + PC2 _{MET} * Sex	-163.44	343.6	8.56	0.004

logL, log-likelihood; AICc, size-corrected Akaike information criterion; Δ AICc, difference in AICc value with highest supported model; w_i , Akaike weight.

Table A1.3

Candidate linear models of adult plumage brightness in relation to fecal metals of Tree Swallow chicks.

Predictors	logL	AICc	Δ AICc	w _i
PC2 _{MET}	-145.99	298.5	0.00	0.350
PC2 _{MET} + Sex	-144.94	298.8	0.27	0.306
PC1 _{MET} + PC2 _{MET}	-145.96	300.8	2.32	0.110
PC2 _{MET} * Sex	-144.77	300.9	2.43	0.104
PC1 _{MET} * Sex + PC2 _{MET}	-143.79	301.6	3.08	0.075
PC2 _{MET} * Sex + PC1 _{MET}	-144.68	303.4	4.86	0.031
PC1 _{MET} * Sex + PC2 _{MET} * Sex	-143.54	303.8	5.31	0.025
Intercept only	-158.18	320.6	22.11	0.000
Sex	-158.13	322.8	24.29	0.000
PC1 _{MET}	-158.17	322.9	24.36	0.000
PC1 _{MET} + Sex	-158.13	325.2	26.65	0.000
PC1 _{MET} * Sex	-156.97	325.3	26.84	0.000

logL, log-likelihood; AICc, size-corrected Akaike information criterion; Δ AICc, difference in AICc value with highest supported model; w_i, Akaike weight.

Table A1.4

Candidate linear models of oxidative stress of adult males, ASY females and SY females in relation to fecal metals of Tree Swallow chicks.

Predictors	logL	AICc	Δ AICc	w _i
<i>Males</i>				
LDATE	25.54	-44.0	0.00	0.35
Intercept only	23.90	-43.3	0.73	0.24
PC1 _{MET} + LDATE	25.83	-41.0	2.19	0.12
PC1 _{MET}	24.33	-41.6	2.41	0.10
PC2 _{MET} + LDATE	25.56	-41.3	2.74	0.09
PC2 _{MET}	23.95	-40.9	3.17	0.07
PC1 _{MET} + PC2 _{MET}	24.38	-38.9	5.10	0.03
<i>ASY Females</i>				
PC2 _{MET}	9.77	-11.8	0.00	0.45
PC2 _{MET} + LDATE	11.30	-11.5	0.30	0.39
PC1 _{MET} + PC2 _{MET}	9.78	-8.5	3.34	0.08
LDATE	7.63	-7.5	4.28	0.05
Intercept only	4.74	-4.7	7.14	0.01
PC1 _{MET} + LDATE	7.65	-4.2	7.59	0.01
PC1 _{MET}	4.99	-2.3	9.55	0.00
<i>SY females</i>				
LDATE	8.37	-8.1	0.00	0.39
Intercept only	6.09	-7.0	1.09	0.23

PC1 _{MET}	7.40	-6.1	1.93	0.15
PC1 _{MET} + LDATE	9.03	-5.1	3.01	0.09
PC2 _{MET} + LDATE	8.76	-4.5	3.55	0.07
PC2 _{MET}	6.11	-3.6	4.52	0.04
PC1 _{MET} + PC2 _{MET}	8.07	-3.2	4.92	0.03

logL, log-likelihood; AICc, size-corrected Akaike information criterion; Δ AICc, difference in AICc value with highest supported model; w_i , Akaike weight; LDATE, laying date.

Table A1.5

Candidate linear models of number of young fledged in relation to fecal metals of Tree Swallow chicks.

Predictors	logL	AICc	Δ AICc	w_i
PC1 _{MET}	-46.00	98.9	0.00	0.33
PC1 _{MET} + AGEf	-45.88	101.3	2.42	0.09
PC1 _{MET} + PC2 _{MET}	-45.98	101.5	2.61	0.09
PC1 _{MET} + LDATE	-46.00	101.5	2.65	0.09
AGEf	-47.39	101.7	2.78	0.08
PC2 _{MET}	-47.42	101.7	2.85	0.08
LDATE	-47.42	101.7	2.85	0.08
PC2 _{MET} * AGEf	-45.75	103.9	5.02	0.03
PC1 _{MET} * AGEf	-45.82	104.0	5.15	0.02
PC2 _{MET} + AGEf	-47.36	104.3	5.37	0.02
LDATE + AGEf	-47.39	104.3	5.43	0.02
PC2 _{MET} + LDATE	-47.42	104.4	5.49	0.02
PC2 _{MET} * AGEf + PC1 _{MET}	-44.93	105.4	6.46	0.01
PC2 _{MET} * AGEf + LDATE	-45.73	107.0	8.08	0.00
PC1 _{MET} * AGEf + PC2 _{MET}	-45.74	107.0	8.09	0.00
PC1 _{MET} * AGEf + LDATE	-45.82	107.1	8.25	0.00
PC1 _{MET} * AGEf + PC2 _{MET} *AGEf	-44.90	108.7	9.79	0.00
PC2 _{MET} * AGEf + PC1 _{MET} + LDATE	-44.91	108.7	9.81	0.00
PC1 _{MET} * AGEf + PC2 _{MET} + LDATE	-45.73	110.3	11.45	0.00
PC1 _{MET} * AGEf + PC2 _{MET} * AGEf + LDATE	-44.90	112.3	13.45	0.00

logL, log-likelihood; AICc, size-corrected Akaike information criterion; Δ AICc, difference in AICc value with highest supported model; w_i , Akaike weight; LDATE, laying date; AGEf, age of the female.