

Haemosporidian Infection Is Associated with the Oxidative Status in a Neotropical Bird

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Methods of molecular sexing

DNA extraction

DNA was extracted from dried blood spots using Dried Blood Spot DNA Isolation Kit (Norgen Biotek Corp) following manufacturer's protocol. DNA yield was determined by measuring the concentration of DNA in the eluate by its absorbance at 260 nm using Picodrop spectrophotometer (Pico200, Picodrop Limited).

Polymerase Chain Reaction for sexing birds

All PCR reactions were performed in 10 µl volumes using 15 ng of DNA, 1.25 U Platinum Taq DNA Polymerase with 1x of PCR buffer (Invitrogen), 0.25 mM dNTPs, 1.75 mM MgCl₂, and 1 µM of primers 2550F (5'-GTTACTGATTCGTCTACGAGA-3') and 2718R (5'-ATTGAAATGATCCAGTGCTTG-3'). Finally, the PCR reaction with DNA as template was carried out with the following conditions, 94°C for 2 min, 45 cycles of denaturation at 94°C for 30 sec, annealing for 45 sec at 48°C and extension at 72°C for 45 sec, followed by final extension at 72°C for 10 min. PCR products were separated in 1% agarose gels (FMC Bioproducts, Seakem), run in standard TAE buffer, and visualized by Gel Red (Biotium) staining.

Table S1. Table shows all models for TAC, TBARS, and TBARS/TAC ratio with AIC value.

TBARS Levels						
Parameter	Coefficient	SE	t	p	Effects	AIC
(Intercept)	-4412984,00	0.156267	-28240,00	<2e-16	fixed	-1846.0
Haemosporidios1	-0.020599	0.101440	-0.203	0.839	fixed	-1846.0
SeasonNon-breeding	-0.074673	0.113665	-0.657	0.511	fixed	-1846.0
SexM	-0.058085	0.068212	-0.852	0.394	fixed	-1846.0
BCI	-0.001957	0.010980	-0.178	0.859	fixed	-1846.0
Haemosporidios1:SeasonNon-breeding	0.162369	0.144934	1120,00	0.263	fixed	-1846.0
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-852530,00	0.14492	-58.83	<2e-16 ***	fixed	-1846,50
Haemosporidios1	0.27271	0.10824	2.52	0.0118 *	fixed	-1846,50
SeasonNon-breeding	-0.04776	0.11478	-0.42	0.6774	fixed	-1846,50

BCI	-0.01417	0.01122	-1.26	0.2065	fixed	-1846,50
Haemosporidios1:SeasonNon-breeding	-23035,00	0.14689	-1.57	0.1168	fixed	-1846,50
Location	0,22				random	-1846,50
Elevation	0,00				random	-1846,50
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-8,51	0,14	-59,47	3,13E-40	fixed	-1846,98
Haemosporidios1	0,25	0,11	2,33	0,0198537	fixed	-1846,98
SeasonNon-breeding	-0,07	0,11	-0,65	0,5163578	fixed	-1846,98
Haemosporidios1:SeasonNon-breeding	-0,20	0,15	-1,35	0,1782817	fixed	-1846,98
Location:Elevation	0,22731121				random	-1846,98
TAC Levels						
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-440964,00	0.15442	-28556,00	<2e-16	fixed	-923.7
Haemosporidios1	-0.03926	0.09856	-0.398	0.690	fixed	-923.7
SeasonNon-breeding	-0.09009	0.10504	-0.858	0.391	fixed	-923.7
Haemosporidios1:SeasonNon-breeding	-0.04975	0.06574	-0.757	0.449	fixed	-923.7
SexM	0.19249	0.13430	1433,00	0.152		-923.7
Location					random	-923.7
Elevation	0,04				random	-923.7
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-4436367,00	0.150981	-29384,00	<2e-16	fixed	-927,16
Haemosporidios1	-0.028610	0.100997	-0.283	0.777	fixed	-927,16
SeasonNon-breeding	-0.080062	0.107157	-0.747	0.455	fixed	-927,16
BCI	-0.004874	0.010837	-0.450	0.653	fixed	
Haemosporidios1:SeasonNon-breeding	0.179927	0.137812	1306,00	0.192	fixed	-927,16
Location:Elevation	0,25				random	-927,16
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-4436367,00	0.150981	-29384,00	<2e-16	fixed	-925,40
Haemosporidios1	-0.028610	0.100997	-0.283	0.777	fixed	-925,40
SeasonNon-breeding	-0.080062	0.107157	-0.747	0.455	fixed	-925,40
BCI	-0.004874	0.010837	-0.450	0.653	fixed	-925,40
Haemosporidios1:SeasonNon-breeding	0.179927	0.137812	1306,00	0.192	fixed	-925,40
Location:Elevation	0,25				random	-925,40
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-442.940	0.14970	-29.588	<2e-16	fixed	-925,40
Haemosporidios1	-0.03810	0.09885	-0.385	0.700	fixed	-925,40
SeasonNon-breeding	-0.08916	0.10535	-0.846	0.397	fixed	-925,40
Haemosporidios1:SeasonNon-breeding	0.19329	0.13474	1.435	0.151	fixed	
Location:Elevation	0,06				random	-925,40
TBARS/TAC ratio						
Parameter	Coefficient	SE	t	p	Effects	AIC

(Intercept)	-4076142	0.109513	-37.22	<0,0000000000000002	fixed	-764,3
Haemosporidios1	0.488499	0.124806	3.91	9.08e-05	fixed	-764,3
SeasonNon-breeding	0.001893	0.136409	0.01	0.98893	fixed	-764,3
SexM	0.026358	0.086266	0.31	0.75995	fixed	-764,3
BCI	-0.534663	0.175802	-3.04	0.00236	fixed	-764,3
Haemosporidios1:SeasonNon-breeding	-0,51498474	0,24983209	-2,06132343	0,0392722	fixed	-764,3
Location:Elevation					random	-764,3
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-407.467	0.10270	-39.68	< 0,0000	fixed	-767,2
Haemosporidios1	0.49471	0.12449	3.97	7.07e-05	fixed	-767,2
SeasonNon-breeding	0.02674	0.13832	0.19	0.84669	fixed	-767,2
SexM	-0.01284	0.01323	-0.97	0.33185	fixed	-767,2
Haemosporidios1:SeasonNon-breeding	-0.56141	0.17755	-3.16	0.00157	fixed	-767,2
Location	1,7187E-05				random	-767,2
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-3,77690668	0,68497452	-5,51393746	3,509E-08	fixed	-764,5338
Haemosporidios1	0,48037323	0,12606563	3,8105013	0,0001387	fixed	-764,5338
SeasonNon-breeding	0,00061875	0,13633497	0,00453845	0,9963789	fixed	-764,5338
Residuos	-0,01422134	0,03211463	-0,4428304	0,6578884	fixed	-764,5338
Haemosporidios1:SeasonNon-breeding	-0,51497771	0,18111563	-2,84336427	0,004464	fixed	-764,5338
Elevation	1,2984E-05				random	-764,5338
Parameter	Coefficient	SE	z	p	Effects	AIC
(Intercept)	-4,06431539	0,10258868	-39,6175832	0	fixed	-768,2441
Haemosporidios1	0,48629023	0,12464378	3,90143989	9,562E-05	fixed	-768,2441
SeasonNon-breeding	0,00223239	0,13645569	0,01635981	0,9869473	fixed	-768,2441
Haemosporidios1:SeasonNon-breeding	-0,53273775	0,17575558	-3,03112847	0,0024364	fixed	-768,2441
Location:Elevation	1,7889E-05				random	-768,2441