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Name: Naima C. Starkloff
Date: March 31, 2020

Drivers of community turnover differ between avian haemoparasite genera along a North American latitudinal gradient.

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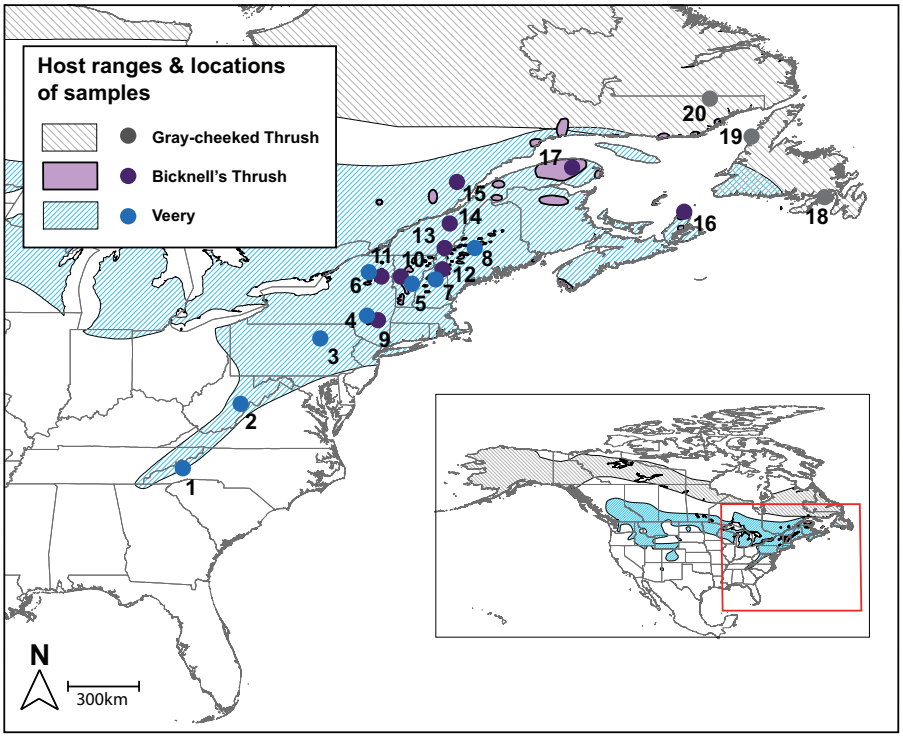
Appendix 1: Comparison of linear mixed effects models predicting the prevalence and alpha diversity of *Leucocytozoon* and *Plasmodium* parasites in three closely related species of *Catharus* thrushes (n=414). We did not model *Haemoproteus* infection status as infections were rare (mean 7% infected). Models are ranked in ascending order of ΔAICc, relative to the model with the lowest AICc for that parasite genus (bolded). The lowest AICc is indicative of the best model in the set. K indicates the number of parameters in each model. W represents the Akaike weight which is a measure of probability of the model being the best in the set. All models included sampling timespan as random effects including the intercept only model. Prevalence was arcsine transformed and alpha diversity was quantified by extrapolating the Shannon diversity Index at each site.

Dependent variable	Variables included	AICc	ΔAICc	K	W
Leucocytozoon	**intercept only**	**19.98**	**0.00**	**3**	**0.899**
prevalence	host	24.86	4.88	5	0.078
	host+latitude	28.32	8.35	6	0.014
	latitude	29.27	9.29	4	0.009
	elevation	38.60	18.62	4	0.000
	host+elevation	41.28	21.30	6	0.000
	host*latitude	44.58	24.61	8	0.000
	latitude+elevation	47.96	27.99	5	0.000
	host+latitude+elevation	48.21	28.24	7	0.000
	host*latitude+elevation	65.27	45.30	9	0.000
	intercept only	**-8.26**	**0.00**	**3**	**0.934**

Plasmodium	latitude	-2.72	5.54	4	0.058
prevalence	host	1.29	9.55	5	0.008
	host+latitude	10.66	18.92	6	0.000
	elevation	11.83	20.09	4	0.000
	latitude+elevation	17.38	25.64	5	0.000
	host+elevation	21.85	30.11	6	0.000
	host*latitude	29.38	37.63	8	0.000
	host+latitude+elevation	31.65	39.90	7	0.000
	host*latitude+elevation	52.01	60.27	9	0.000
Leucocytozoon	**intercept only**	**80.09**	**0.00**	**3**	**0.735**
diversity	host	83.97	3.87	5	0.106
	latitude	83.97	3.88	4	0.106
	host+latitude	85.42	5.33	6	0.051
	host*latitude	92.95	12.86	8	0.001
	elevation	95.69	15.60	4	0.000
	host+latitude+elevation	97.81	17.72	7	0.000
	latitude+elevation	99.28	19.19	5	0.000
	host+elevation	100.06	19.97	6	0.000
	host*latitude+elevation	108.39	28.30	9	0.000
Plasmodium	**host**	**83.02**	**0.00**	**5**	**0.701**
diversity	intercept only	85.09	2.07	3	0.249
	host+latitude	89.29	6.26	6	0.031
	latitude	90.28	7.25	4	0.019
	host+elevation	99.04	16.02	6	0.000
	elevation	99.19	16.16	4	0.000
	host*latitude	99.29	16.27	8	0.000
	latitude+elevation	102.51	19.49	5	0.000
	host+latitude+elevation	105.20	22.18	7	0.000



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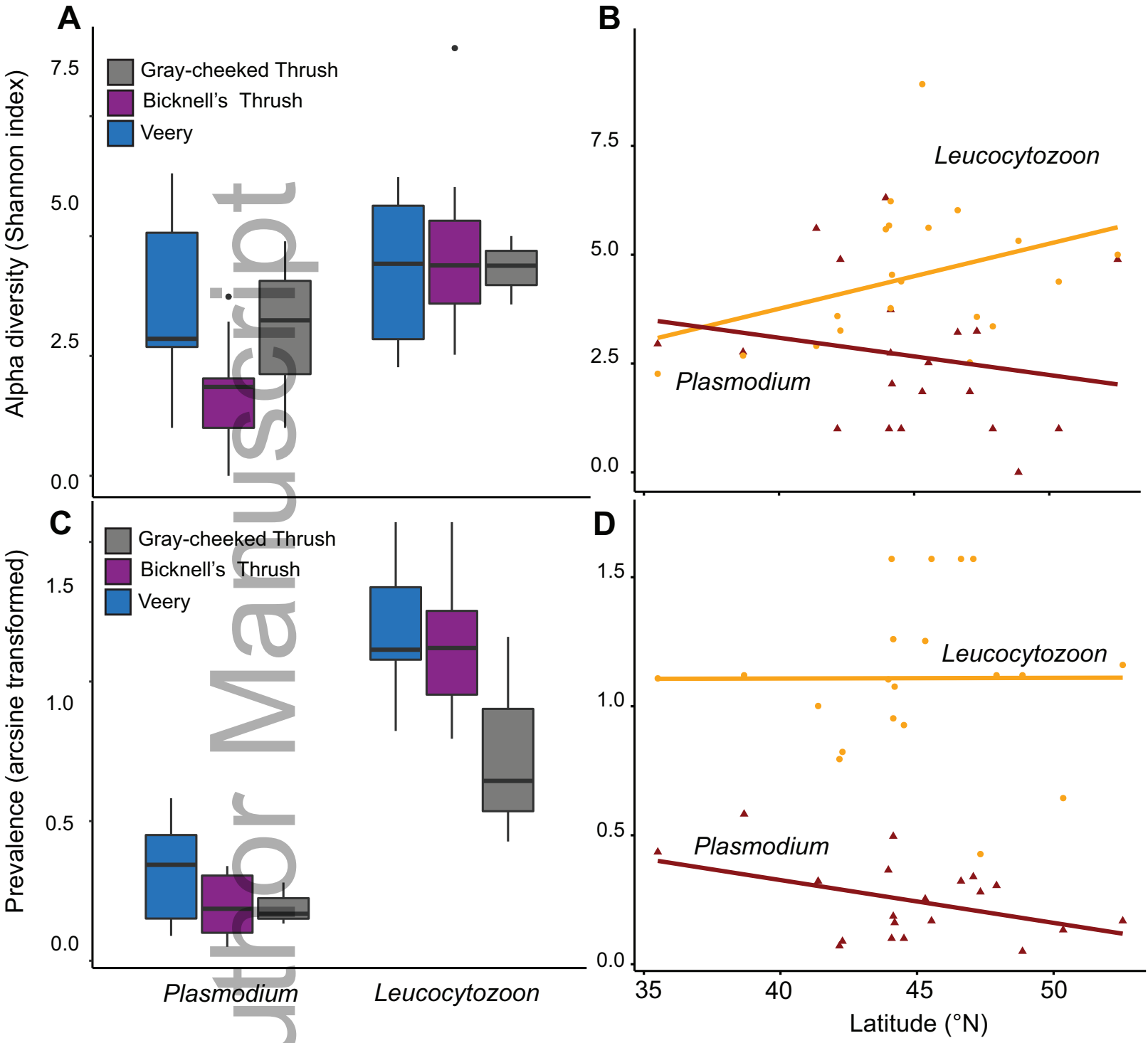

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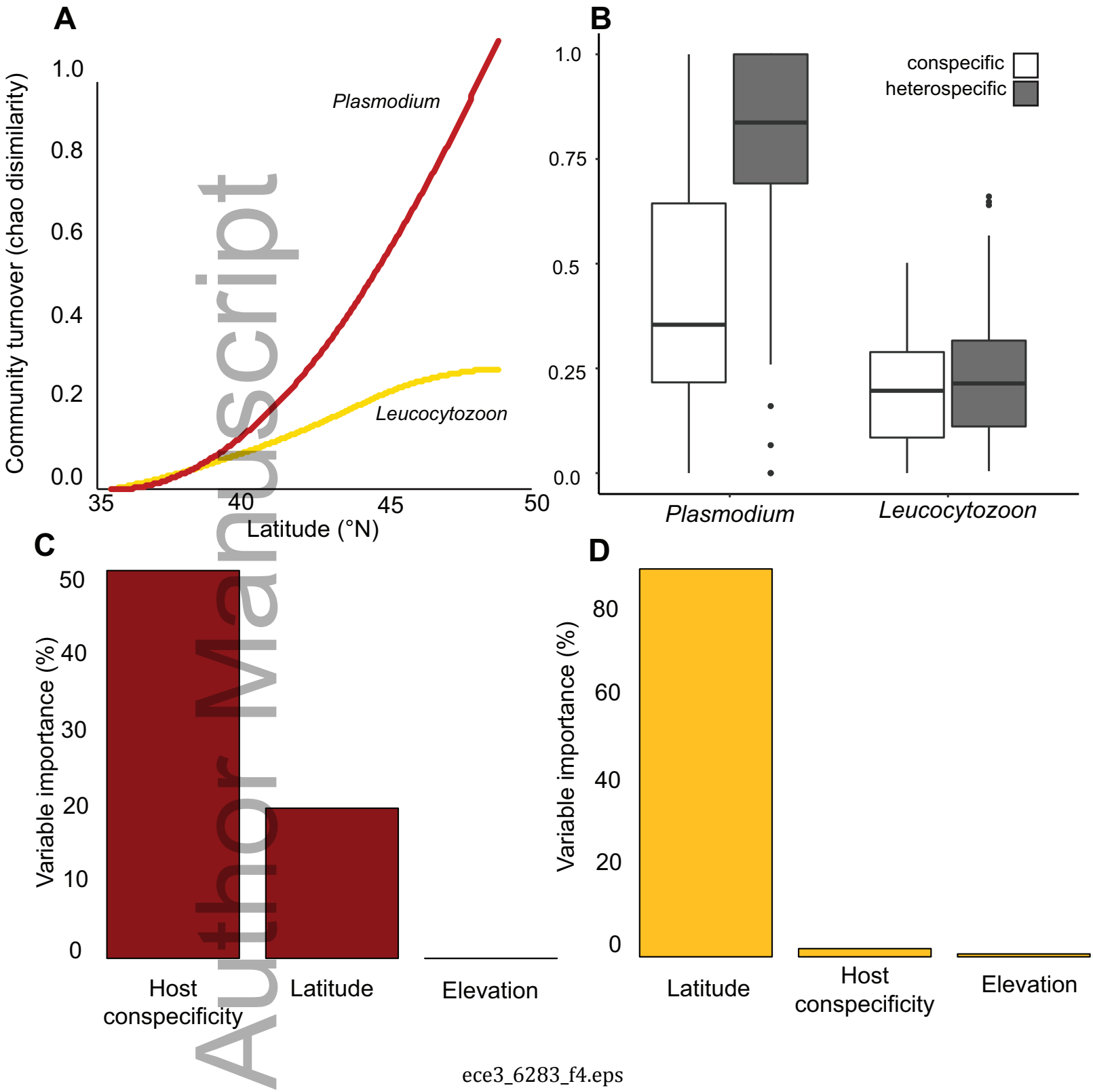

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