

Effects of exotic pastures on tadpole assemblages in Pantanal floodplains:
assessing changes in species composition

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Supplementary Material

Table S1. Detection probability models by species. The symbol Ψ indicates the occupancy portion of the model, while the symbol p denotes the detection portion of the model. (.) The parameter was constant. Models that failed to converge were discarded.

Species/ Models	AICc	Δ AICc	AICc weight
<i>Dendropsophus nanus</i>			
Ψ (.), p (vegetation volume ²)	139.27	0.00	0.21
Ψ (.), p (.)	139.45	0.18	0.19
Ψ (.), p (vegetation volume)	139.98	0.71	0.14
Ψ (.), p (pH)	140.47	1.20	0.11
Ψ (.), p (conductivity)	141.20	1.93	0.08
Ψ (.), p (temperature)	141.40	2.13	0.07
Ψ (.), p (rainfall)	141.54	2.27	0.07
Ψ (.), p (depth)	141.57	2.30	0.06
Ψ (.), p (temperature ²)	141.76	2.49	0.06
<i>Scinax fuscomarginatus</i>			
Ψ (.), p (conductivity)	270.45	0.00	0.93
Ψ (.), p (pH)	277.16	6.71	0.03
Ψ (.), p (vegetation volume)	278.55	8.10	0.02
Ψ (.), p (vegetation volume ²)	279.43	8.98	0.01
Ψ (.), p (temperature)	279.65	9.20	0.00
Ψ (.), p (temperature ²)	283.52	13.07	0.00
Ψ (.), p (.)	317.47	47.02	0.00
Ψ (.), p (depth)	319.69	49.24	0.00
Ψ (.), p (rainfall)	319.72	49.27	0.00
<i>Physalaemus centralis</i>			
Ψ (.), p (temperature)	95.07	0.00	0.59
Ψ (.), p (temperature ²)	95.85	0.78	0.40
Ψ (.), p (pH)	103.05	7.98	0.01
Ψ (.), p (conductivity)	107.32	12.25	0.00
Ψ (.), p (vegetation volume ²)	109.20	14.13	0.00
Ψ (.), p (vegetation volume)	109.81	14.74	0.00
Ψ (.), p (.)	137.40	42.33	0.00
Ψ (.), p (rainfall)	140.29	45.22	0.00
Ψ (.), p (depth)	140.42	45.35	0.00
<i>Physalaemus cuvieri</i>			
Ψ (.), p (vegetation volume)	112.58	0.00	0.36
Ψ (.), p (vegetation volume ²)	113.29	0.71	0.25
Ψ (.), p (conductivity)	114.64	2.06	0.13
Ψ (.), p (pH)	114.78	2.20	0.12
Ψ (.), p (temperature)	115.37	2.79	0.09
Ψ (.), p (temperature ²)	116.57	3.99	0.05
Ψ (.), p (rainfall)	123.45	10.87	0.00
Ψ (.), p (.)	123.95	11.37	0.00
Ψ (.), p (depth)	124.08	11.50	0.00
<i>Elachistocleis matogrosso</i>			
Ψ (.), p (conductivity)	101.37	0.00	0.54
Ψ (.), p (pH)	103.10	1.73	0.23
Ψ (.), p (temperature)	104.85	3.48	0.09
Ψ (.), p (temperature ²)	106.03	4.66	0.05
Ψ (.), p (vegetation volume)	106.20	4.83	0.05
Ψ (.), p (vegetation volume ²)	106.63	5.26	0.04
Ψ (.), p (.)	135.95	34.58	0.00
Ψ (.), p (rainfall)	136.55	35.18	0.00
Ψ (.), p (depth)	138.40	37.03	0.00

Table S2. Occupancy models by species. The symbol Ψ indicates the occupancy portion of the model, while the symbol p denotes the detection portion of the model. (.) The parameter was constant. Models that failed to converge were discarded.

Species/ Models	AICc	Δ AICc	AICc weight
<i>Dendropsophus nanus</i>			
Ψ (fish), p (vegetation volume ²)	129.47	0.00	0.98
Ψ (fish, vegetation cover), p (vegetation volume ²)	139.19	9.72	0.00
Ψ (.), p (vegetation volume ²)	139.27	9.80	0.00
Ψ (vegetation cover), p (vegetation volume ²)	148.02	18.55	0.00
<i>Scinax fuscomarginatus</i>			
Ψ (vegetation cover), p (conductivity)	266.47	0.00	0.55
Ψ (fish, vegetation cover), p (conductivity)	267.25	0.78	0.37
Ψ (.), p (conductivity)	270.45	3.98	0.07
Ψ (fish), p (conductivity)	280.36	13.89	0.00
<i>Physalaemus centralis</i>			
Ψ (fish), p (temperature)	93.09	0.00	0.72
Ψ (.), p (temperature)	95.07	1.98	0.27
Ψ (fish, vegetation cover), p (temperature)	104.34	11.25	0.00
Ψ (vegetation cover), p (temperature)	104.73	11.64	0.00
<i>Physalaemus cuvieri</i>			
Ψ (fish), p (vegetation volume)	112.19	0.00	0.53
Ψ (.), p (vegetation volume)	112.58	0.39	0.44
Ψ (fish, vegetation cover), p (vegetation volume)	118.67	6.48	0.02
Ψ (vegetation cover), p (vegetation volume)	119.8	7.61	0.01
<i>Elachistocleis matogrosso</i>			
Ψ (.), p (conductivity)	101.37	0.00	0.65
Ψ (fish), p (conductivity)	103.87	2.50	0.18
Ψ (vegetation cover), p (conductivity)	104.43	3.06	0.14
Ψ (fish, vegetation cover), p (conductivity)	107.91	6.54	0.02

Table S3. Anuran species recorded across different vegetation covers in the 27 study plots in northern Pantanal, Brazil, from December/2006 to April/2007.

Family/ Species	Vegetation cover			
	Native grassland	Exotic pasture	Cambarazal	Flooded forest
Hylidae				
<i>Dendropsophus nanus</i>	11	5	6	16
<i>Hypsiboas raniceps</i>	1		1	
<i>Lysapsus limellum</i>	3			1
<i>Scinax fuscomarginatus</i>	69	60	13	13
<i>Scinax nasicus</i>	17	2	2	2
<i>Trachycephalus typhonius</i>		2		27
Leptodactylidae				
<i>Leptodactylus fuscus</i>	6			
<i>Physalaemus albonotatus</i>	24			
<i>Physalaemus biligonigerus</i>	26	9	1	3
<i>Physalaemus centralis</i>	38	10	1	
<i>Physalaemus cuvieri</i>	15	16	5	1
Microhylidae				
<i>Chiasmocleis albopunctata</i>				21
<i>Elachistocleis matogrosso</i>	20	28	1	28

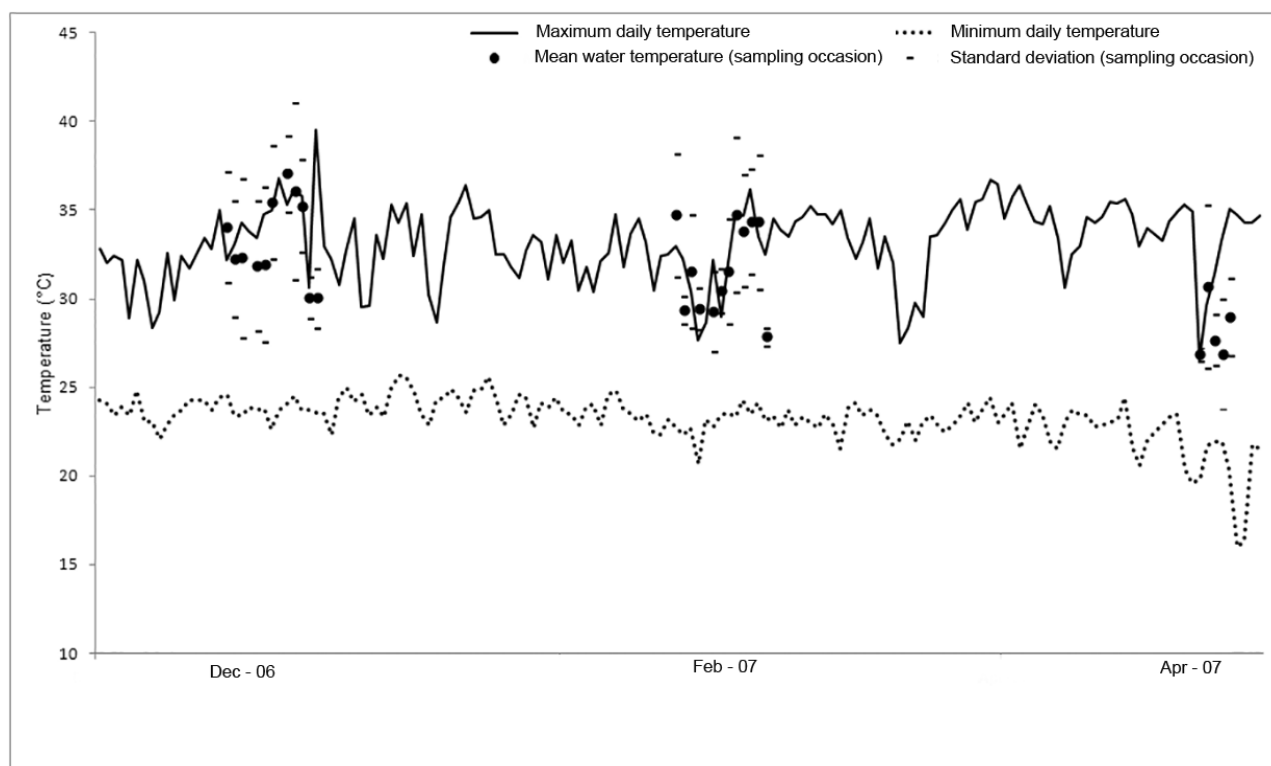


Figure S1. Monthly temperature pattern during the study period.

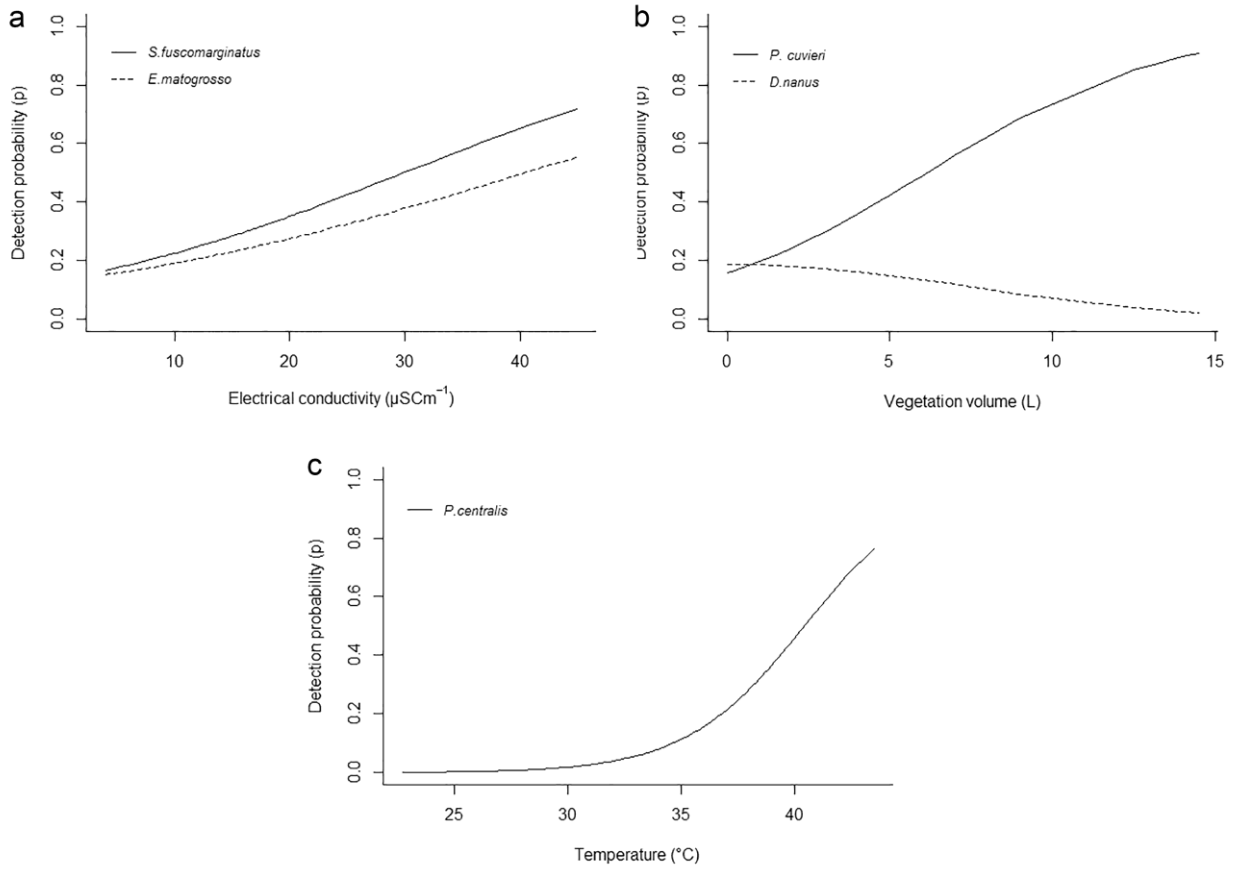


Figure S2. Relationship between detectability and covariates contained in the best detection models for tadpoles of five anuran species in northern Pantanal: (a) electrical conductivity, (b) vegetation volume, and (c) water temperature. See Results for full species names.