SUPPLEMENTARY MATERIAL S9

The use of different buffer radius had little impact on parameters estimate of both linear models with $S_{rarefied}$ (Tab. **S9**) or LCBD as response variables (Tab. **S10**). For the models with $S_{rarefied}$ as response variable, only the model with proportion of impervious surface estimated with a buffer of 800m was non–significant ($F_{2, 42} = 3.13$, $P = 0.054$). Considering the parameter estimates, only for the model with proportion of impervious surface estimated with a buffer of 100m had a change in signal for distance to median (EH). The coefficient of determination (R^2_{adj}) varied from 0.09 to 0.17. There were no change in the omnibus tests, significance and direction of parameter estimates for the models with LCBD as response variable (Tab. **S10**). The pseudo–coefficient of determination (*Pseudo–R²*) varied from 0.19 to 0.32.

TABLE S9 | Sensitivity analyses assessing the influence of proportion of impervious surface estimated with different buffer radius on the relationship between rarefied species richness ($S_{rarefied}$), proportion of impervious surface and distance to median (EH). SE: standard-error.

Buffer radius (m)	Parameter	Estimate	SE	t	P	F	d.f.	P	R^2_{adj}
100	Intercept	2.06	0.42	4.90	< 0.001	5.16	2, 42	0.010	0.16
	log(EH)	0.05	0.38	0.12	0.903				
	Proportion of impervious surface	-1.17	0.36	-3.21	0.003				
200	Intercept	2.30	0.45	5.09	< 0.001	5.36	2, 42	0.008	0.17
	log(EH)	-0.02	0.38	0.04	0.966				
	Proportion of impervious surface	-1.36	0.41	-3.27	0.002				
300	Intercept	2.38	0.49	4.84	< 0.001	4.24	2, 42	0.021	0.13
	log(EH)	-0.02	0.39	-0.05	0.958				
	Proportion of impervious surface	-1.37	0.47	-2.91	0.006				
400	Intercept	2.45	0.53	4.60	< 0.001	3.52	2, 42	0.039	0.10
	log(EH)	-0.04	0.40	-0.10	0.922				
	Proportion of impervious surface	-1.38	0.52	-2.65	0.011				
500	Intercept	2.53	0.56	4.50	< 0.001	3.32	2, 42	0.046	0.10
	log(EH)	-0.05	0.40	-0.13	0.898				
	Proportion of impervious surface	-1.43	0.56	-2.58	0.014				
800	Intercept	2.68	0.61	4.35	< 0.001	3.13	2, 42	0.054	0.09
	log(EH)	-0.07	0.40	-0.18	0.857				
	Proportion of impervious surface	-1.54	0.61	-2.50	0.016				
1000	Intercept	2.80	0.61	4.59	< 0.001	3.86	2, 42	0.029	0.12
	log(EH)	-0.08	0.40	-0.19	0.850				
	Proportion of impervious surface	-1.71	0.62	-2.78	0.008				
1500	Intercept	2.95	0.61	4.86	< 0.001	4.75	2, 42	0.014	0.15
	log(EH)	-0.13	0.39	-0.33	0.746				
	Proportion of impervious surface	-1.94	0.63	-3.08	0.004				
2000	Intercept	2.92	0.61	4.81	< 0.001	4.58	2, 42	0.016	0.14
	log(EH)	-0.15	0.39	-0.38	0.707				
	Proportion of impervious surface	-1.98	0.66	-3.03	0.004				

Neotropical Ichthyology

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