



Influence of farm characteristics and surrounding habitat on amphibian communities in Afrotropical cocoa

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APPENDIX I: Additional information on sampling sites

Table S1. Additional information on cocoa sampling sites, including location, landscape, distance to forest and farm characteristics. See Fig. 1 in Main Text for map.

Farm	Latitude	Longitude	Landscape	Distance to forest (m)	Leaf litter depth (cm)	Canopy cover (%)	Ground vegetation height	Husk piles	Dead wood piles	Water bodies
MAMA	3.35773	12.73725	Somalomo	0	3	94.7	18	3	16	0
STADE	3.38308	12.74529	Somalomo	0	8	98.7	61	3	45	0
PALM	3.38741	12.74300	Somalomo	153	5	63.5	11	3	23	0
SNAKE	3.39001	12.74924	Somalomo	0	8	88.6	41	1	42	0
NGUI1	3.86398	12.43288	Ayos	292	7	73.4	6	1	42	5 puddles
NGUI2	3.86365	12.42673	Ayos	0	10	87.5	17	2	41	0
EBA1	3.90672	12.51043	Ayos	789	7	94.8	11	6	20	0
EBA3	3.91195	12.50733	Ayos	273	6	82.3	14	3	38	0
PAIJA2	3.97200	12.45021	Ayos	0	16	71.3	24	0	77	0
EBEK	4.04347	12.70014	Ayos	0	8	90.0	36	3	61	4 large connected pools, swamp

EKOK	4.08369	12.68218	Ayos	0	9	85.0	12	0	61	0
ELAT SOUTH	3.90349	11.71647	Elat	207	4	30.8	26	3	17	0
ELAT NORTH	3.89624	11.71762	Elat	76	6	87.3	27	0	35	3 puddles
NKOL SOUTH	3.58884	11.32919	Ngoumou	0	9	90.8	37	3	32	0
EBEM	3.57199	11.33041	Ngoumou	0	10	93.9	35	4	45	0

APPENDIX II: Principal Component Analysis loadings

Table S2. Principal Component Analysis loadings for surrounding habitat variables

Variable	PC1	PC2	PC3	PC4	PC5	PC6	PC6
Open fields	0.24	0.57	-0.37	0.07	0.45	0.35	-0.38
Closed canopy forest	0.44	-0.27	-0.34	0.34	-0.45	-0.23	-0.49
Open canopy forest	0.42	0.27	0.39	-0.47	0.11	-0.57	-0.19
Palm	0.22	-0.01	0.76	0.46	0.00	0.37	-0.19
Villages	-0.34	0.46	0.09	-0.27	-0.69	0.21	-0.28
Water bodies	0.38	-0.42	-0.03	-0.60	-0.06	0.56	-0.02
Cocoa	-0.51	-0.37	0.10	-0.14	0.33	-0.08	-0.68

APPENDIX III: Predicted effects of farm characteristics and surrounding habitat

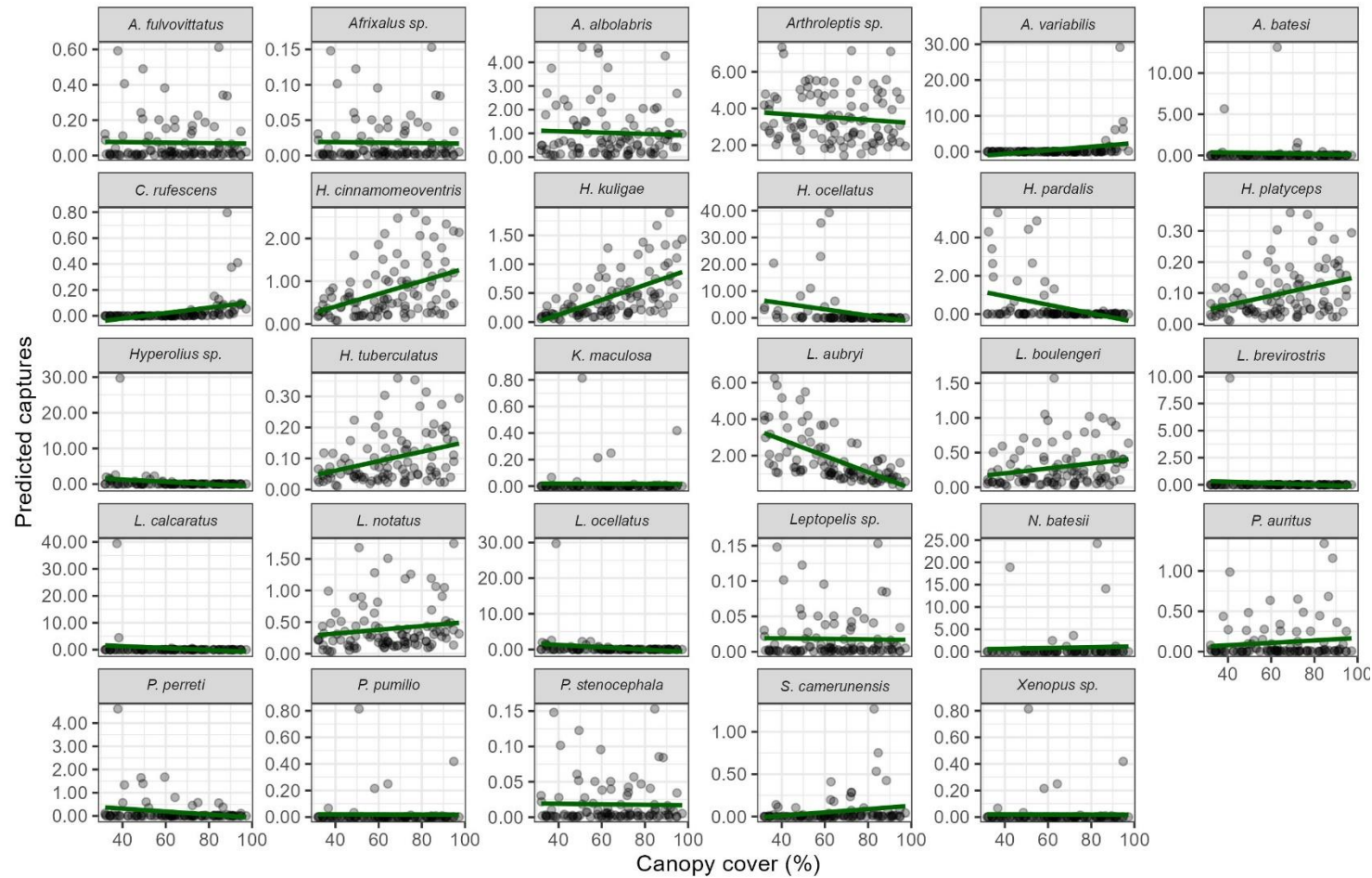


Figure S1. Predicted number of captures of amphibian species with canopy cover (%) in cocoa farms. Predictions were made from multivariate GLMs, with dots representing predicted captures and the green line showing the model coefficient.

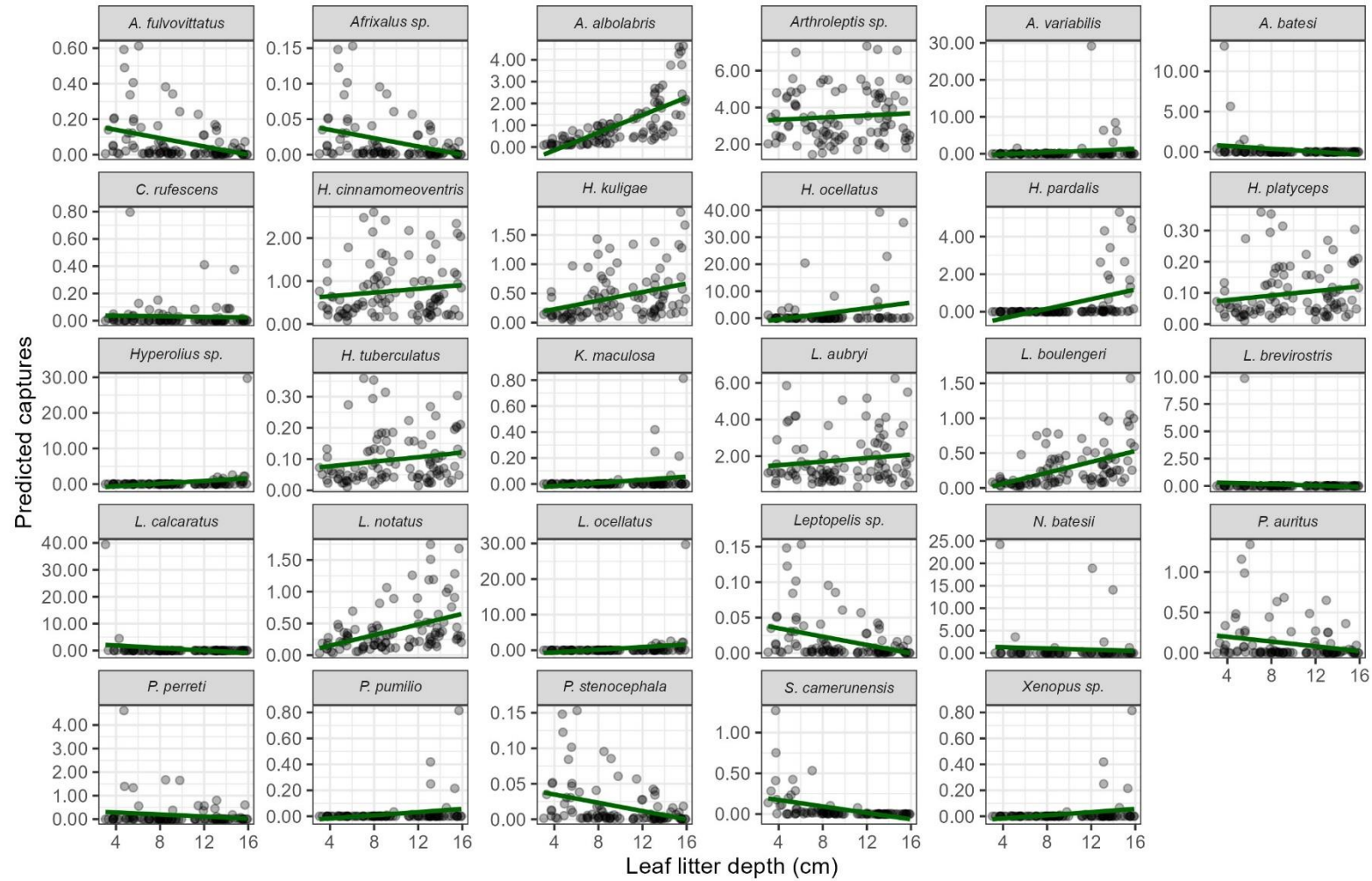


Figure S2. Predicted number of captures of amphibian species with leaf litter depth (cm) in cocoa farms. Predictions were made from multivariate GLMs, with dots representing predicted captures and the green line showing the model coefficient.

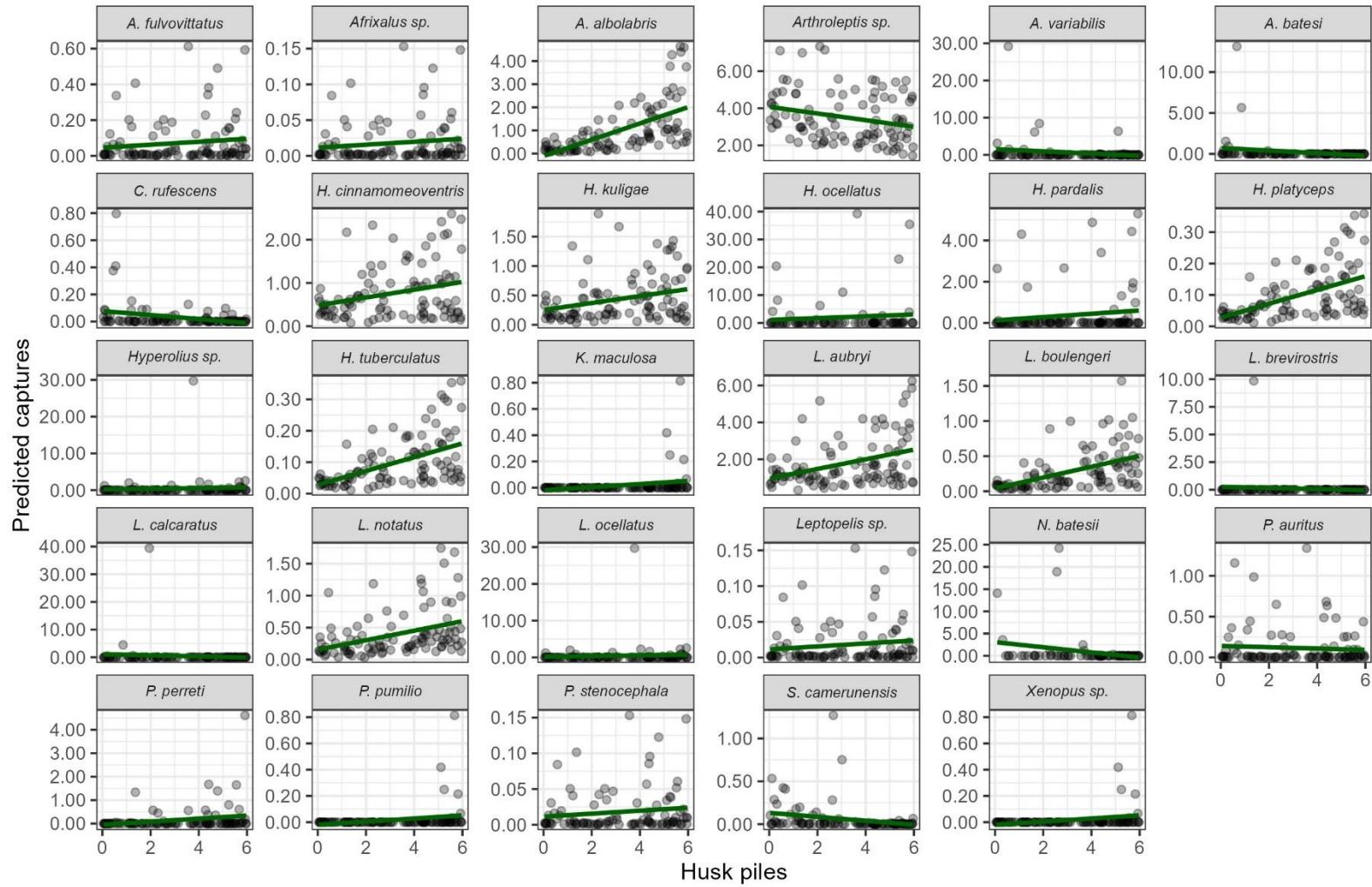


Figure S3. Predicted number of captures of amphibian species with husk piles in cocoa farms. Predictions were made from multivariate GLMs, with dots representing predicted captures and the green line showing the model coefficient.

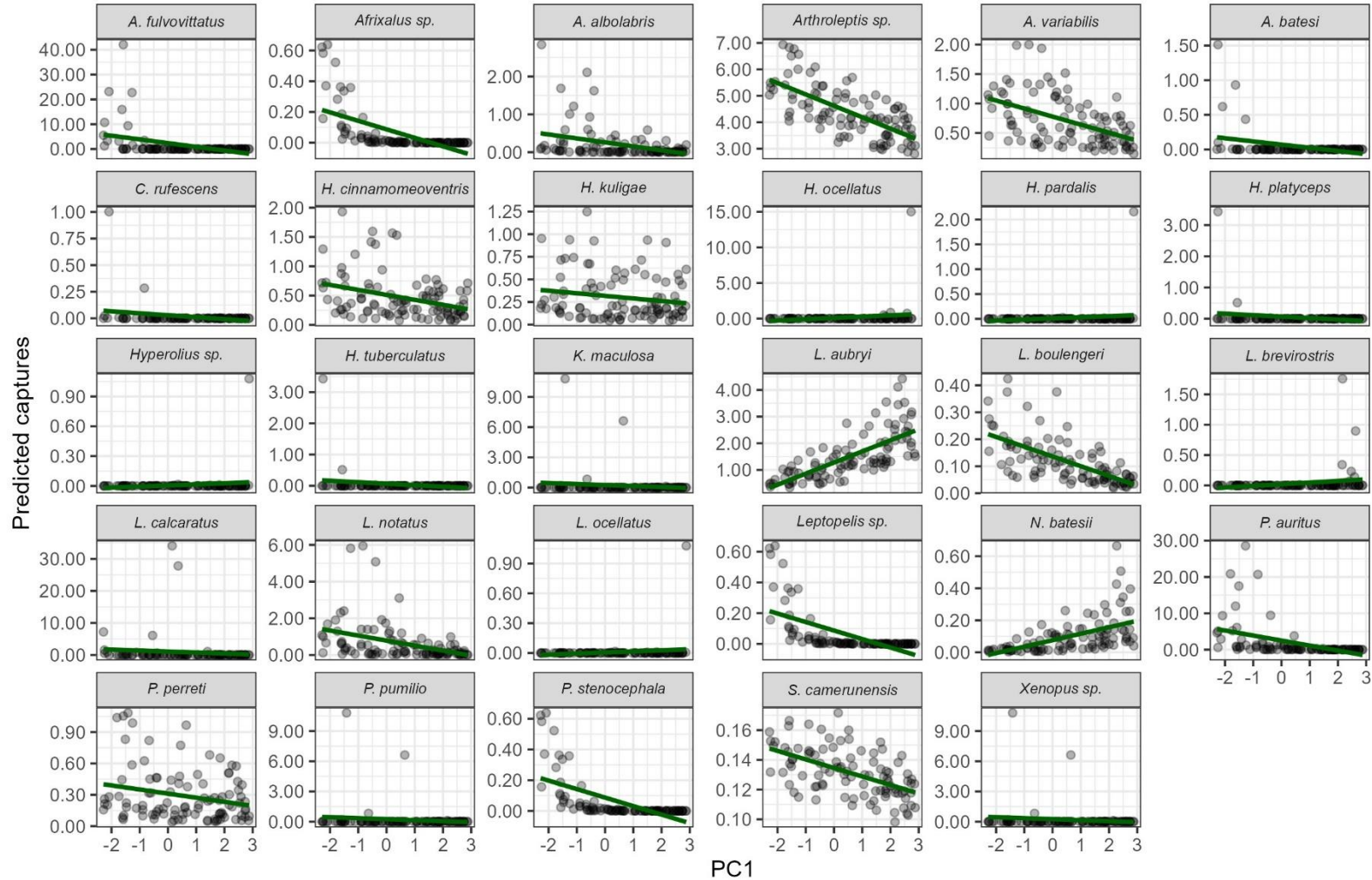


Figure S4. Predicted number of captures of amphibian species with PC1 of surrounding habitat in cocoa farms. Predictions were made from multivariate GLMs, with dots representing predicted captures and the green line showing the model coefficient.

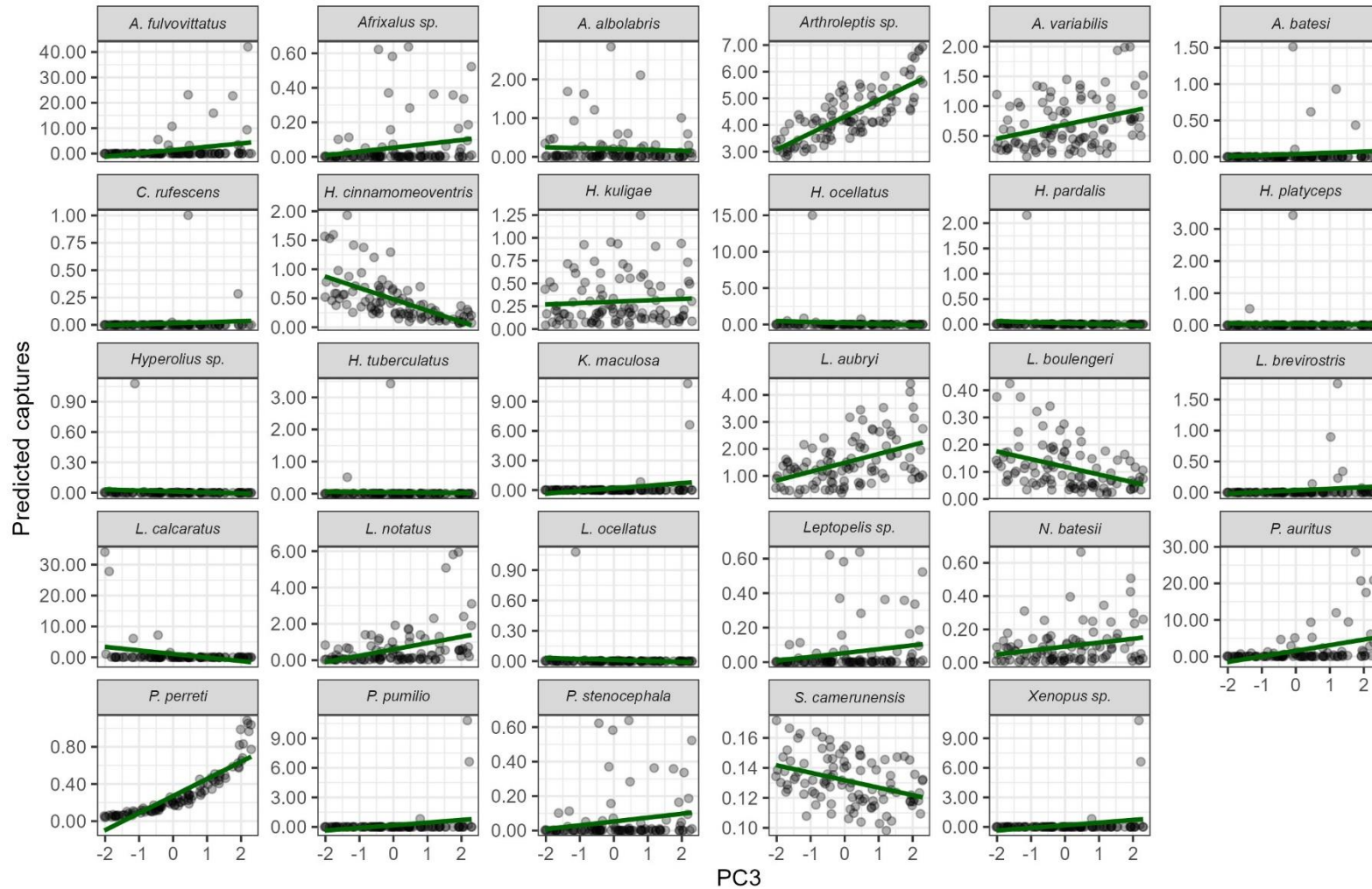


Figure S5. Predicted number of captures of amphibian species with PC3 of surrounding habitat in cocoa farms. Predictions were made from multivariate GLMs, with dots representing predicted captures and the green line showing the model coefficient.

<i>Arthroleptis sp.</i>	Intercept	2.26			Intercept	1.49			Intercept	1.51		
	Leaf litter	0.01	0.29	0.82	PC1	-0.09	0.80	0.45	Forest	-16.33	0.04	0.98
	Canopy cover	0.00	1.02	0.46	PC2	-0.02	0.07	0.96				
	Ground veg height	-0.02	2.31	0.09	PC3	0.13	0.81	0.48				
	Husk piles	-0.08	1.03	0.38								
<i>Arthroleptis variabilis</i>	Intercept	-31.26			Intercept	-0.53			Intercept	-0.41		
	Leaf litter	0.29	0.28	0.79	PC1	-0.15	0.50	0.63	Forest	-1.20	1.15	0.21
	Canopy cover	0.36	1.31	0.23	PC2	0.39	1.24	0.29				
	Ground veg height	-0.08	1.63	0.11	PC3	0.14	0.37	0.78				
	Husk piles	-0.76	2.04	0.01								
<i>Astylosternus batesi</i>	Intercept	9.53			Intercept	-33.21			Intercept	-2.71		
	Leaf litter	-2.59	0.60	0.25	PC1	-14.35	0.41	0.44	Forest	-12.11	0.03	0.58
	Canopy cover	0.03	0.41	0.51	PC2	-1.41	0.07	0.80				
	Ground veg height	0.12	0.27	0.51	PC3	9.66	0.10	0.79				
	Husk piles	-5.60	0.14	0.53								
<i>Chiromantis rufescens</i>	Intercept	-12.04			Intercept	-39.08			Intercept	-1.61		
	Leaf litter	-0.15	0.83	0.34	PC1	-17.19	1.54	0.07	Forest	-13.21	0.03	0.61
	Canopy cover	0.16	0.82	0.25	PC2	-3.95	0.87	0.18				
	Ground veg height	-0.05	0.52	0.35	PC3	16.72	0.48	0.18				
	Husk piles	-0.47	1.01	0.06								
<i>Hyperolius cinnamomeoventris</i>	Intercept	-3.99			Intercept	-0.81			Intercept	-0.51		
	Leaf litter	0.02	0.38	0.74	PC1	-0.25	0.90	0.46	Forest	-14.30	0.03	0.72
	Canopy cover	0.02	1.62	0.22	PC2	-0.31	0.55	0.63				
	Ground veg height	0.05	1.89	0.13	PC3	-0.49	0.78	0.48				
	Husk piles	0.14	0.51	0.62								
<i>Hyperolius kuligae</i>	Intercept	-5.63			Intercept	-1.35			Intercept	-0.92		
	Leaf litter	0.08	0.49	0.65	PC1	-0.14	0.87	0.45	Forest	-13.90	0.03	0.68
	Canopy cover	0.03	1.41	0.21	PC2	-0.65	1.26	0.26				

	Ground veg height	0.03	0.93	0.33	PC3	0.06	0.10	0.92				
	Husk piles	0.16	0.48	0.58								
<i>Hyperolius ocellatus</i>	Intercept	2.42			Intercept	-27.38			Intercept	-2.01		
	Leaf litter	1.17	1.05	0.18	PC1	9.35	1.49	0.03	Forest	-12.80	0.03	0.64
	Canopy cover	-0.33	0.09	0.58	PC2	-3.19	1.18	0.02				
	Ground veg height	0.11	0.01	0.48	PC3	-5.14	0.23	0.25				
	Husk piles	0.12	0.00	0.71								
<i>Hyperolius pardalis</i>	Intercept	-14.53			Intercept	-16.68			Intercept	-2.01		
	Leaf litter	1.54	0.11	0.61	PC1	1.50	1.21	0.09	Forest	-12.80	0.03	0.63
	Canopy cover	-0.14	0.02	0.70	PC2	-4.56	0.18	0.57				
	Ground veg height	0.01	0.00	0.85	PC3	-3.46	0.04	0.73				
	Husk piles	-0.23	0.00	0.74								
<i>Hyperolius platyceps</i>	Intercept	-5.90			Intercept	-20.48			Intercept	-2.71		
	Leaf litter	0.02	0.09	0.63	PC1	-5.08	0.81	0.26	Forest	-12.11	0.03	0.58
	Canopy cover	0.01	0.46	0.31	PC2	-6.61	0.18	0.37				
	Ground veg height	0.04	0.47	0.27	PC3	-2.18	0.05	0.46				
	Husk piles	0.27	0.34	0.26								
<i>Hyperolius sp.</i>	Intercept	-14.54			Intercept	-16.39			Intercept	-2.71		
	Leaf litter	1.47	0.10	0.55	PC1	1.42	0.82	0.22	Forest	-12.11	0.03	0.41
	Canopy cover	-0.13	0.01	0.65	PC2	-4.30	0.16	0.69				
	Ground veg height	0.01	0.00	0.54	PC3	-3.26	0.03	0.69				
	Husk piles	-0.22	0.00	0.65								
<i>Hyperolius tuberculatus</i>	Intercept	-5.90			Intercept	-20.48			Intercept	-2.71		
	Leaf litter	0.02	0.09	0.63	PC1	-5.08	0.81	0.26	Forest	-12.11	0.03	0.58
	Canopy cover	0.01	0.46	0.31	PC2	-6.61	0.18	0.41				
	Ground veg height	0.04	0.47	0.24	PC3	-2.18	0.05	0.63				
	Husk piles	0.27	0.34	0.26								
<i>Kassina maculosa</i>	Intercept	-25.17			Intercept	-22.98			Intercept	-2.71		

<i>Leptopelis boulengeri</i>	Leaf litter	0.41	0.25	0.50	PC1	0.16	0.40	0.47	Forest	-12.11	0.03	0.60
	Canopy cover	0.08	0.89	0.10	PC2	-7.55	1.06	0.08				
	Ground veg height	-0.24	0.09	0.30	PC3	7.95	0.18	0.10				
	Husk piles	2.93	0.04	0.53								
	Intercept	-6.22			Intercept	-2.23			Intercept	-2.01		
<i>Leptopelis brevirostris</i>	Leaf litter	0.13	0.36	0.54	PC1	-0.33	0.58	0.49	Forest	2.80	3.65	0.01
	Canopy cover	0.01	0.75	0.32	PC2	0.27	0.49	0.60				
	Ground veg height	0.04	0.56	0.49	PC3	-0.31	0.35	0.61				
	Husk piles	0.32	0.53	0.43								
	Intercept	38.20			Intercept	-18.45			Intercept	-2.71		
<i>Leptopelis calcaratus</i>	Leaf litter	-3.44	0.95	0.14	PC1	4.21	0.46	0.37	Forest	-12.11	0.03	0.44
	Canopy cover	-0.22	0.49	0.17	PC2	-2.15	0.24	0.61				
	Ground veg height	-1.19	0.44	0.12	PC3	4.08	0.09	0.61				
	Husk piles	2.01	0.15	0.61								
	Intercept	-27.21			Intercept	-7.91			Intercept	-0.92		
<i>Leptopelis aubryi</i>	Leaf litter	-5.96	1.03	0.38	PC1	-3.24	0.35	0.76	Forest	0.92	1.51	0.09
	Canopy cover	0.52	1.90	0.08	PC2	-0.33	0.86	0.45				
	Ground veg height	0.67	2.12	0.04	PC3	-6.37	1.40	0.15				
	Husk piles	-5.47	0.25	0.53								
	Intercept	2.41			Intercept	0.00			Intercept	0.34		
<i>Leptopelis notatus</i>	Leaf litter	0.02	0.91	0.62	PC1	0.34	1.29	0.32	Forest	-0.34	0.68	0.70
	Canopy cover	-0.02	2.07	0.19	PC2	0.14	0.48	0.69				
	Ground veg height	-0.03	1.33	0.45	PC3	0.26	0.65	0.67				
	Husk piles	0.07	0.47	0.77								
	Intercept	-2.06			Intercept	-1.55			Intercept	-0.76		
	Leaf litter	0.09	0.24	0.82	PC1	-0.41	0.80	0.47	Forest	-14.05	0.03	0.73
	Canopy cover	0.01	0.32	0.79	PC2	0.95	2.39	0.04				
	Ground veg height	-0.04	1.17	0.31	PC3	0.50	1.10	0.25				

