

## Jumping into a trap: high prevalence of chytrid fungus in the preferred microhabitats of a bromeliad-specialist frog

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Table S1. Voucher information and *Bd* accession numbers for specimens of *Phyllodytes edelmoi* used in *Bd* analysis collected in the Estação Ecológica de Murici (ESEC Murici), state of Alagoas, Brazil.

<i>Bd</i> Voucher	Museum Voucher	<i>Bd</i> Voucher	Museum Voucher
SLFT 2988	11794	SLFT 1897	11484
SLFT 2996	11800	SLFT 1898	na
SLFT 2997	11801	SLFT 1904	11489
SLFT 2998	11804	SLFT 1906	na
SLFT 2999	11805	SLFT 1907	na
SLFT 3000	11806	MLFT 0036	11513
SLFT 3001	11807	MLFT 0037	11520
SLFT 3002	11808	MLFT 0038	11519
SLFT 3003	11811	MLFT 0039	11518
SLFT 3043	11571	MLFT 0040	11517
SLFT 3044	11570	MLFT 0041	11516
SLFT 1891	11478	MLFT 0042	11515
SLFT 1892	11479	MLFT 0043	11514
SLFT 1893	11480	MLFT 0044	11521
SLFT 1894	na	MLFT 0045	11522
SLFT 1895	11482	MLFT 0046	11523
SLFT 1896	11483	MLFT 0047	11524

Table S2. Measurements of microclimatic conditions and phytotelm characteristics in bromeliads with and without *Phyllodytes edelmoi* for dry and wet season. Diameter refers to diameter of the phytotelm. Length is length of largest bromeliad leaf. Leaves (number) is the number of bromeliad leaves. Column is maximum column size of bromeliad available to store water. Volume is relative volume of bromeliad. pH is self-explanatory. Tm refers to microhabitat temperature (within phytotelm). Ta is ambient air temperature. RH % is ambient relative humidity. Canopy closure (%) is the proportion of sky obscured by vegetation at a single point. All data are presented as mean  $\pm$  standard deviation (s.d) in parentheses. (\*), Significance level for (W) Mann-Whitney pairwise comparisons or (t) Welch t-test ( $p < 0.05$ ).

Season	Dry				Rainy			
	Occupied	Unoccupied	Test	P	Occupied	Unoccupied	Test	P
Diameter (cm)	15.24 ( $\pm 4.26$ )	18.3 ( $\pm 3.05$ )	t = -1.6	0.12	17.3( $\pm 3.15$ )	17.7( $\pm 4.24$ )	t = -0.26	0.79
Length (cm)	64.5 ( $\pm 24.7$ )	77.3( $\pm 14.9$ )	t = -1.3	0.23	78.1 ( $\pm 14.64$ )	67.6 ( $\pm 17.2$ )	t = -1.3	0.23
Leaves (number)	15 ( $\pm 2.38$ )	14.1 ( $\pm 2.6$ )	t = 0.8	0.43	16.1 ( $\pm 1.87$ )	14.8 ( $\pm 3.05$ )	W = 76.5	0.16
Column depth (cm)	27.6 ( $\pm 6.9$ )	26.8 ( $\pm 5.2$ )	t = -0.04	0.96	30.4 ( $\pm 3.76$ )	31.3 ( $\pm 4.63$ )	t = 0.28	0.79
Volume (L)	0.17 ( $\pm 0.13$ )	0.14 ( $\pm 0.07$ )	W = 73	1.0	0.21( $\pm 0.09$ )	0.17( $\pm 0.09$ )	t = 1.19	0.24
pH	5 ( $\pm 0.67$ )	5.25 ( $\pm 0.46$ )	t = -0.93	0.38	4.3 ( $\pm 0.72$ )	4.25 ( $\pm 0.52$ )	W = 106	0.88
Tm ( $^{\circ}$ C)	27.5 ( $\pm 3.25$ )	27.8 ( $\pm 3.01$ )	t = -0.20	0.84	26.4 ( $\pm 4.57$ )	24.1 ( $\pm 3.06$ )	t = 0.27	0.79
Ta ( $^{\circ}$ C)	30.53 ( $\pm 2.38$ )	31.57 ( $\pm 2.94$ )	W = 59	0.45	29.3 ( $\pm 4.93$ )	28.2 ( $\pm 5.52$ )	t = -0.95	0.36
RH (%)	66.29 ( $\pm 6.47$ )	64.24 ( $\pm 8.30$ )	t = 0.67	0.51	68.8 ( $\pm 14.58$ )	66.2( $\pm 15.39$ )	t = 0.67	0.51
Canopy closure (%)	29.02 ( $\pm 22.2$ )	20.6 ( $\pm 20.44$ )	W = 55	0.33	5.9 ( $\pm 13.03$ )	9.81( $\pm 12.49$ )	W = 55	0.02*

Table S3. Moran's I test for autocorrelation of variables in dry season in *Portea leptantha* bromeliads. Diameter refers to diameter of the phytotelm. Length is length of largest bromeliad leaf. Leaves (number) is the number of bromeliad leaves. Column is maximum column size of bromeliad available to store water. Volume is relative volume of bromeliad. pH is self-explanatory. Tm refers to microhabitat temperature (within phytotelm). Ta is ambient air temperature. RH % is ambient relative humidity. Canopy closure (%) is the proportion of sky obscured by vegetation at a single point. Anuro refers to bromeligenous spatial georeference. All data are presented as ( $\pm$ ) standard deviation (s.d). Range distance Lag = 15 meters; (\*), Significance level ( $p < 0.05$ ).

Variables	Estimate	expectation	variance	s.d.	P(I) Two-tailed
Bromeliad diameter (cm)	0.153704	-0.038462	0.033181	1.055	0.5829
Length (cm)	-0.019088	-0.038462	0.031879	0.1085	1
Leaves (#)	-0.019088	-0.038462	0.031879	0.1085	1
Column depth (cm)	0.0578994	-0.037037	0.0099769	0.9505	0.6932
Volume (L)	-0.199274	-0.038462	0.031056	-0.9125	0.723
pH	-0.081607	-0.037037	0.010074	-0.4441	0.8119
Tm (°C)	0.0499968	-0.037037	0.0094491	0.8953	0.7796
Ta (°C)	0.089596	-0.038462	0.033137	0.7035	0.9635
RH (%)	0.107023	-0.038462	0.033158	0.799	0.8486
Canopy Clousure (%)	0.380335	-0.038462	0.032341	2.3288	0.03974 *
Anuro	0.024226	-0.038462	0.033937	0.3403	0.8628

Table S4. Moran's I test for autocorrelation of variables in Rainy season in *Portea leptatha* bromeliads.

Diameter refers to diameter of the phytotelm. Length is length of largest bromeliad leaf. Leaves (number) is the number of bromeliad leaves. Column is maximum column size of bromeliad available to store water. Volume is relative volume of bromeliad. pH is self-explanatory. Tm refers to microhabitat temperature (within phytotelm). Ta is ambient air temperature. RH % is ambient relative humidity. Canopy closure (%) is the proportion of sky obscured by vegetation at a single point. Anuro refers to bromeligenous spatial georeference. All data are presented as ( $\pm$ ) standard deviation (s.d). Range distance Lag = 15 meters; (\*), Significance level ( $p < 0.05$ ).

Variables	estimate	Expectation	Variance	s.d.	P(I) Two sided
Bromeliad diameter (cm)	0.143222	-0.038462	0.010731	1.7539	0.397
Length (cm)	0.069037	-0.038462	0.011232	1.0143	1
Leaves (number)	0.102816	-0.038462	0.011209	1.3344	0.364
Column depth (cm)	-0.0047863	-0.0384615	0.0106793	0.3259	1
Volume (L)	0.0087133	-0.0384615	0.010708	0.4559	0.648
pH	-0.194304	-0.038462	0.01026	-1.5385	0.4957
Tm (°C)	0.150922	-0.038462	0.010875	1.816	0.072.
Ta (°C)	0.117213	-0.038462	0.011158	1.4738	0.281
RH (%)	0.2087076	-0.0384615	0.011257	2.3296	0.039*
Canopy closure (%)	0.049326	-0.038462	0.010541	0.855	0.785
Anuro	0.1588671	-0.0384615	0.0115504	1.8361	0.2654

Table S5. Spearman correlations of microclimatic conditions and bromeliad characteristics in rainy season. Variables with normal data were included. Column refers to bromeliad maximum column size available to store water. Diameter is phytotelm diameter. H2O is bromeliad water level. RH % is ambient relative humidity. Leaves is the number of bromeliad leaves. Length refers to the length of the largest bromeliad leaf. Tm is microhabitat temperature in the phytotelm. Ta is ambient air temperature. Volume is relative bromeliad volume. (\*), p values with significance level of (p<0.05).

	Column	Diameter	H2O	RH %	Leaves	Length	Ta	Tm	Volume
Column	1								
Diameter	0.5374	1							
H2O	0.4707	0.469	1						
RH %	-0.2115	-0.0821	-0.1	1					
Leaves	0.2037	0.6836	0.3	-0.113	1				
Length	0.5438	0.298	0.46	-0.181	0.258	1			
Ta	-0.1413	-0.0853	0.06	-0.8*	0.019	-0.028	1		
Tm	-0.1469	-0.0633	-0.1	-0.537	0.025	0.026	0.81*	1	
Volume	-0.1792	0.1675	0.24	0.159	0.273	0.126	0.14	0.225	1

Table S6. Spearman correlations of microclimatic conditions, and bromeliad characteristics in dry season. Variables with normal data were included. Column refers to bromeliad maximum column size available to store water. Diameter is phytotelm diameter. H2O is bromeliad water level. RH % is ambient relative humidity. Leaves is the number of bromeliad leaves. Length refers to the length of the largest bromeliad leaf. pH = is self-explanatory. (\*), P values with significance level of (p < 0.05).

	Column	Diameter	H2O	RH %	Leaves	Length	pH
Column	1.00						
Diameter	0.44	1.00					
H2O	0.72*	0.27	1.00				
RH %	-0.40	-0.06	-0.22	1.00			
Leaves	0.61	0.22	0.36	-0.17	1.00		
Length	0.46	0.46	0.28	-0.16	0.26	1.00	
pH	0.07	0.09	-0.13	0.01	0.05	0.25	1.00

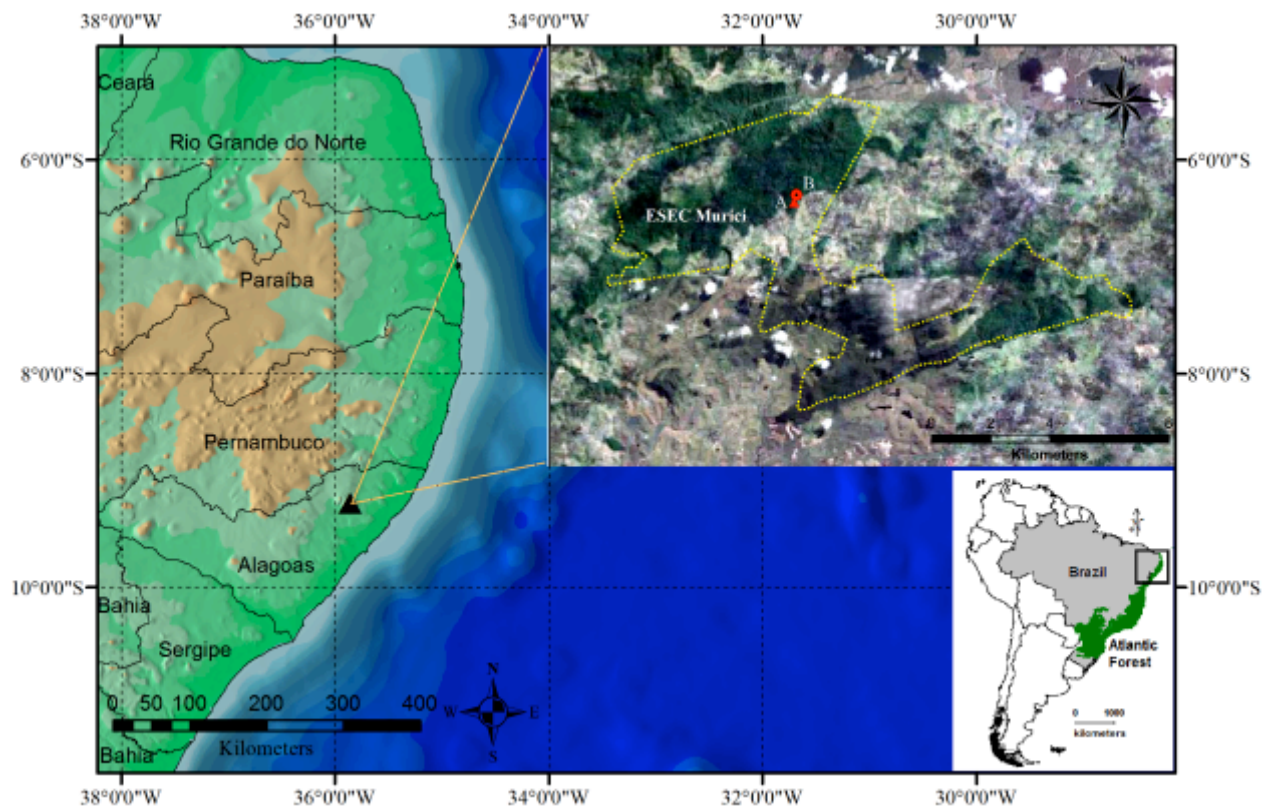


Figure S1. Map of sampled localities. Brazil, Alagoas, Murici, ESEC Murici, *Mata da Bananeira*. Inset map is South America with Atlantic forest in green. The small square highlights the north portion of Atlantic forest. Satellite image with yellow contour details represents Estação Ecológica de Murici (ESEC Murici) and the letter “A” represents the Mata da Bananeira forest fragment.

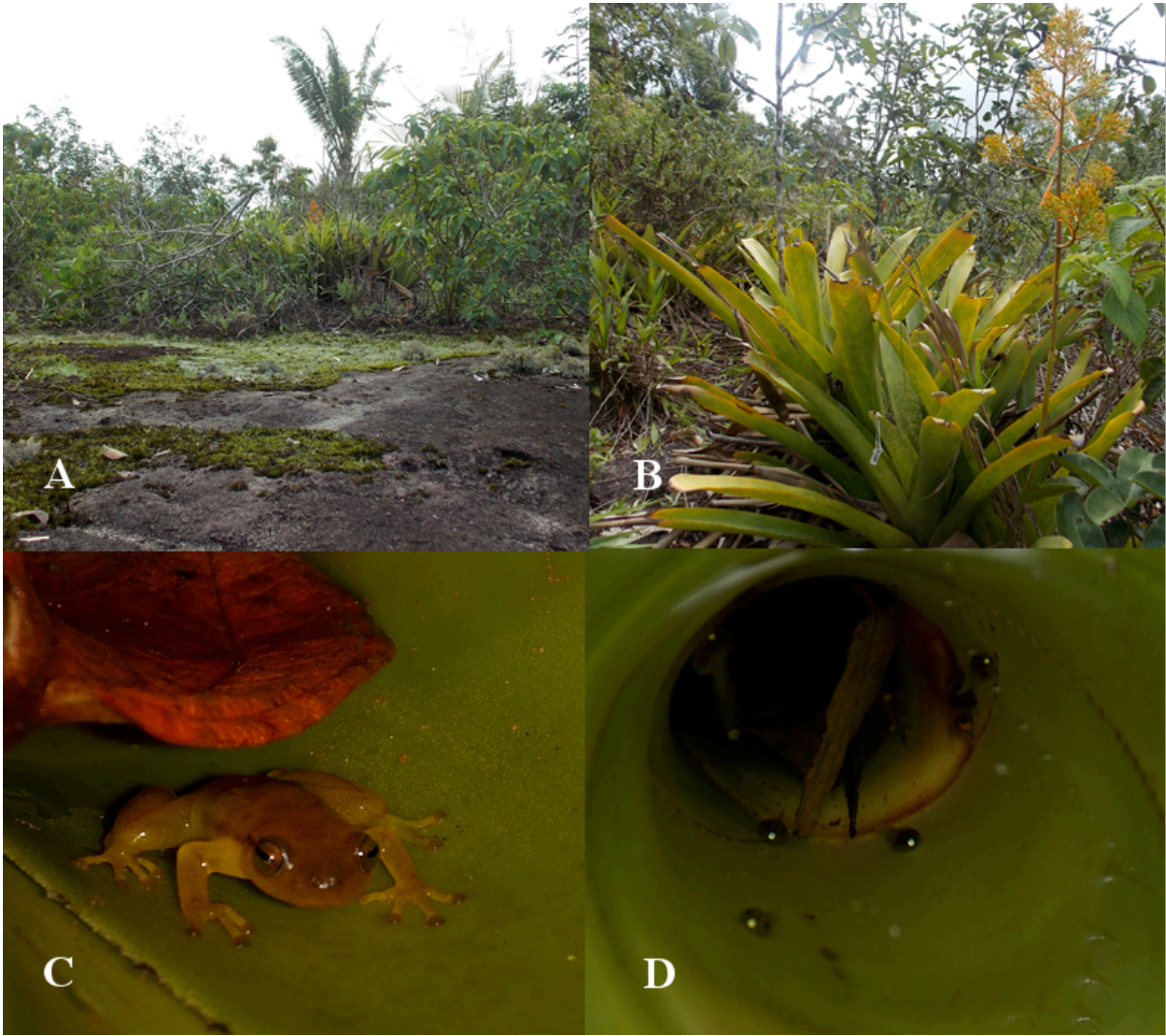


Figure S2. Site and species sampled in the (A) rocky outcrops in the ESEC Murici, Alagoas State, Brazil; (B) bromeliad *Portea leptantha*; (C) adult and (D) tadpoles of *Phyllodytes edelmoi*.

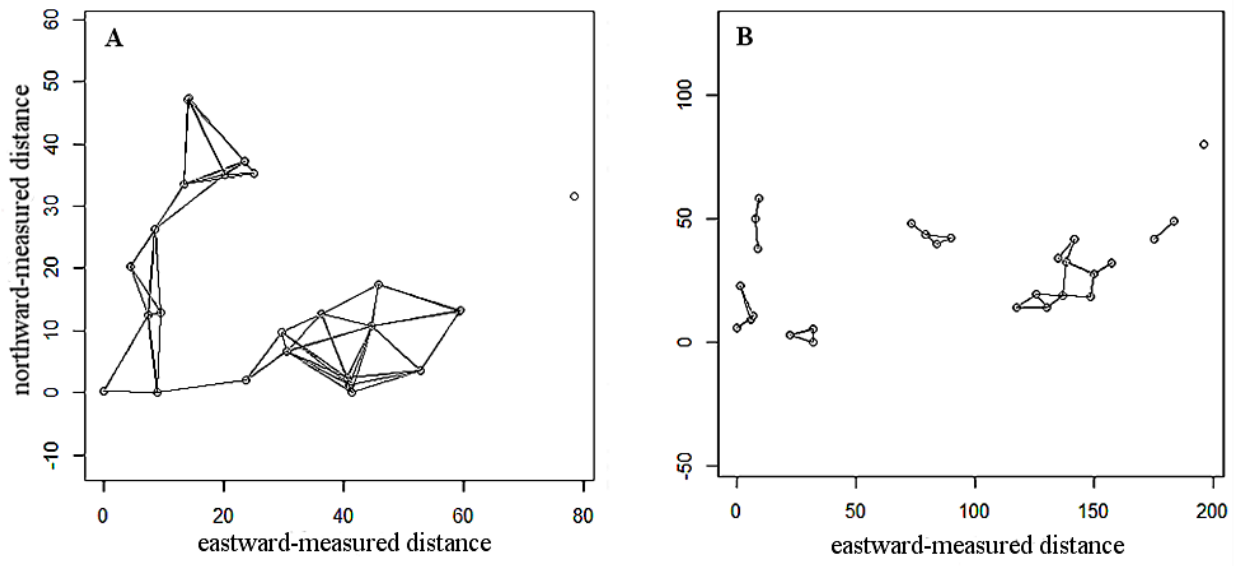


Figure S3. Linkage maps of bromeliad samples distances (m) for autocorrelation analysis. (A) rainy season, and (B) dry season.