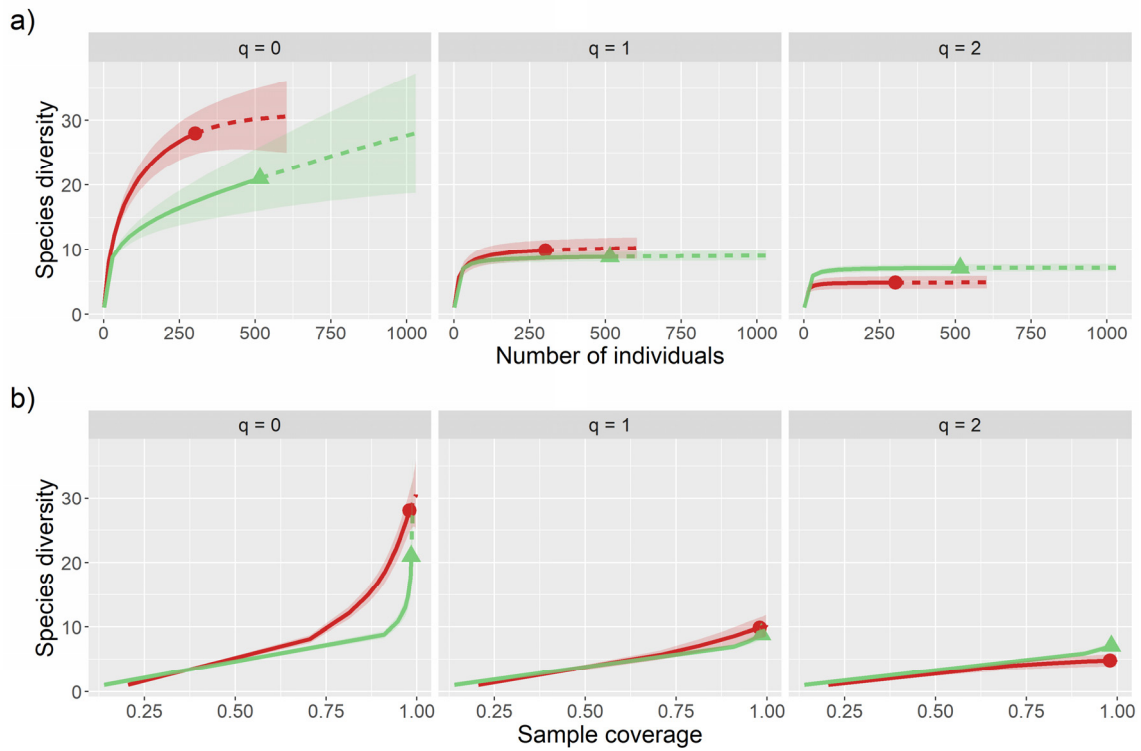Supporting information

Figure S1. Rarefaction (solid lines) and extrapolation (dashed lines, up to double the reference sample size) curves for fruit-feeding butterflies species diversity based on the Hill numbers for the canopy (red line) and the understory (green line). The 95% confidence intervals (shaded regions) were obtained by a bootstrap method based on 1000 replications. (a) Sample-size-based curves and (b) Coverage-based curves.
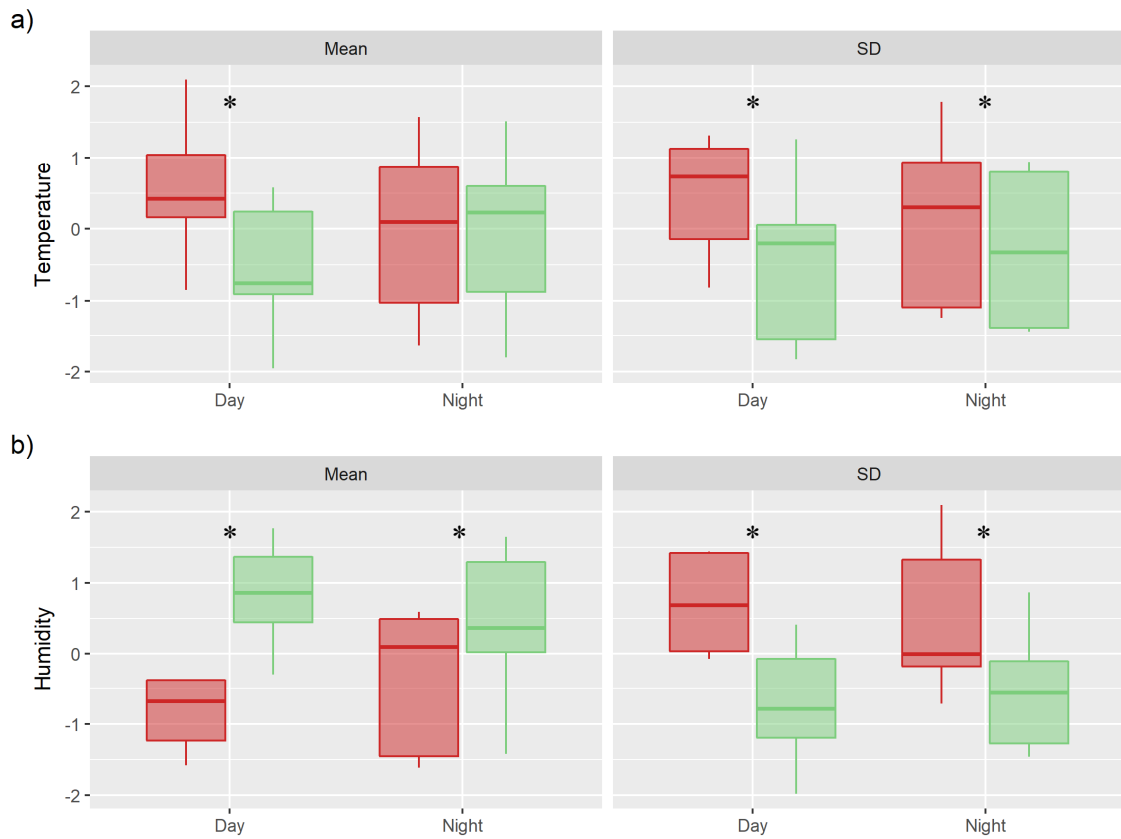
a)

b)

Figure S2. Relationship between environmental variables and vertical stratum for a subtropical forest in the Rio Grande do Sul State, southern Brazil, considering the day and night periods (day = between 8h00min and 18h00min; night = 18h30min to 7h30min). (a) Scaled temperature values, and (b) scaled humidity values. Asterisk represents a significant difference between environmental variables values in canopy (red plots) and understory (green plots). SD, standard deviation.

Table S1. List of species of the fruit-feeding butterflies sampled in a Mixed

Ombrophilous Forest in southern Brazil between November 2016-March 2017 and

October 2017-March 2018.

Subfamily/Tribe/*Species*	Canopy	Understory	Total
Biblidinae	**41**	**6**	**47**
Ageroniini		1	1
Hamadryas epinome (C. Felder & R. Felder, 1867)		1	1
Callicorini	7	1	8
Diaethria candrena (Godart, [1824])	5	1	6
Diaethria clymena (Cramer, 1775)	2		2
Catonephelini	1		1
Eunica eburnea Fruhstorfer, 1907	1		1
Epiphilini	33	4	37
Epiphile hubneri Hewitson, 1861	14	2	16
Epiphile orea (Hübner, [1823])	19	1	20
Temenis laothoe (Cramer, 1777)		1	1
Charaxinae	**126**	**41**	**167**
Anaeini	78	1	79
Memphis hirta (Weymer, 1907)	17		17
Memphis moruus (Fabricius, 1775)	28	1	29
Zaretis strigosus (Gmelin, [1790])	33		33
Preponini	48	40	88
Archaeoprepona amphimachus (Fabricius, 1775)	24	9	33
Archaeoprepona chalciope (Hübner, [1823])	14	29	43
Archaeoprepona demophon (Linnaeus, 1758)	3	2	5

Archaeoprepona demophoon (Hübner, [1814])	1		1
Prepona pylene Hewitson, [1854]	6		6
Nymphalinae	**5**		**5**
Coeini	5		5
Smyrna blomfildia (Fabricius, 1781)	5		5
Satyrinae	**391**	**737**	**1128**
Brassolini	11	168	179
Blepolenis bassus (C. Felder & R. Felder, 1867)	5		5
Blepolenis batea (Hübner, [1821])	2		2
Caligo martia (Godart, [1824])		6	6
Catoblepia amphirhoe (Hübner, [1825])	1		1
Eryphanis reevesii (E. Doubleday, [1849])	1	91	92
Narope cyllastros E. Doubleday, [1849]		2	2
Opoptera fruhstorferi (Röber, 1896)		69	69
Opsiphanes quiteria (Stoll, 1780)	2		2
Morphini	2	66	68
Morpho aega (Hübner, [1822])		1	1
Morpho epistrophus (Fabricius, 1796)	2	60	62
Morpho portis (Hübner, [1821])		5	5
Satyrini	378	503	881
Carminda griseldis (Weymer, 1911)	2	1	3
Carminda paeon (Godart, [1824])	297	45	342
Eteona tisiphone (Boisduval, 1836)	4		4
Euptychoides castrensis (Schaus, 1902)	5		5
Forsterinaria necys (Godart, [1824])	33	107	140

Forsterinaria pronophila (A. Butler, 1867)	20	15	35
Forsterinaria quantius (Godart, [1824])	2	114	116
Hermeuptychia sp. Forster, 1964	2	1	3
Paryphthimoides grimon (Godart, [1824])	6	1	7
Praepedaliodes phanias (Hewitson, 1862)	7	3	10
Pseudodebis ypthima Hübner, [1821]		216	216
Total	**563**	**784**	**1347**

Table S2. Relationship between environmental variables and vertical stratum for a subtropical forest in the Rio Grande do Sul State, southern Brazil, considering the day and night periods (day = between 8h00min and 18h00min; night = 18h30min to 7h30min). The estimated parameters were calculated by linear models (OLS) and represent effects parametrization. Bold values indicate a significative difference (considering a threshold of $p < 0.05$) between strata for each environmental variable evaluated. SE – Standard error.

Environmental variable		Daytime					Nighttime			
	Strata	Estimate	SE	t value	p		Estimate	SE	t value	p
Mean Temperature	Canopy	0.586	0.125	4.679	**1.1E-05**		0.001	0.155	0.007	0.994
	Understory	-1.173	0.177	-6.617	**3.5E-09**		-0.002	0.220	-0.011	0.992
Temperature variation	Canopy	0.477	0.136	3.500	**7.5E-04**		0.218	0.151	1.436	0.155
	Understory	-0.954	0.193	-4.950	**3.9E-06**		-0.435	0.214	-2.031	**0.045**
Mean Humidity	Canopy	-0.830	0.085	-9.712	**2.8E-15**		-0.411	0.141	-2.905	**0.005**
	Understory	1.660	0.121	13.735	**5.7E-23**		0.821	0.200	4.109	**9.4E-05**
Humidity variation	Canopy	0.711	0.108	6.554	**4.6E-09**		0.518	0.132	3.913	**1.9E-04**
	Understory	-1.422	0.153	-9.269	**2.1E-14**		-1.037	0.187	-5.534	**3.7E-07**