|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Espécie** | **Forearm lenght (mm)** | **Weight (g)** | **Dietary Specialization** | **WL** | **AR** |
|  | *Média* *± DP (mín. – máx.) N* | *Média ± DP (mín. – máx.) N* | **I** | **II** | **III** | **IV** | **V** |  |  |
| *Carollia perspicillata* | 40.8± 3.3 (21 – 43.2.) 105 | 19.1± 8.4 (43.1 – 9) 112 | 0 | 0 | 0 | 100 | 0 | 1.74 | 5.81 |
| *Artibeus lituratus* | 71.5± 3.6 (60 – 79.5) 231 | 81.7± 11.9 (51 – 114) 235 | 10 | 0 | 0 | 80 | 10 | 4.68 | 15.81 |
| *Sturnira lilium* | 42.1± 3.2 (38.5 – 36.5) 178 | 25.4± 9.4 (10 – 40,3) 184 | 0 | 0 | 0 | 100 | 0 | 2.37 | 9.74 |
| *Epitesicus diminutus* | 33.1± 1.6 (29.8 – 35.5) 16 | 5± 2.1 (2 – 10) 17 | 100 | 0 | 0 | 0 | 0 | 0.47 | 6.03 |
| *Desmodus rotundus* | 63.2± 0.8 (63 – 65) 5 | 35± 2.1 (32 – 37) 5 | 0 | 100 | 0 | 0 | 0 | 3.37 | 14.96 |
| *Artibeus fimbriatus* | 64.7± 1.9 (68 – 63) 07 | 61.5± 10.7 (84 – 54.) 07 | 10 | 0 | 0 | 80 | 10 | 3.16 | 9.32 |
| *Epitesicus furinalis* | 38.5± 6.5 (22.7 – 39.6) 10 | 4.2± 1.8 (2. – 8) 10 | 100 | 0 | 0 | 0 | 0 | 0.34 | 5.57 |
| *Pygoderma bilabiatum* | 39.8± 1.8 (36.9 – 41.7) 11 | 20± 5.4 (13 – 30) 11 | 0 | 0 | 0 | 100 | 0 | 1.67 | 4.51 |
| *Myotis nigricans* | 30.1± 5.3 (21.4. – 35) 5 | 4± 1.7 (3. – 6) 5 | 100 | 0 | 0 | 0 | 0 | 0.73 | 9.85 |
| *Myotis riparius* | 35.5± 1.9 (31.2 – 36.5) 5 | 3± 0.2 (3 – 4) 5 | 100 | 0 | 0 | 0 | 0 | 0.57 | 10.4 |
| *Platyrrhinus lineatus* | 43.9± 1.2 (42 – 45) 5 | 29.7± 3.1 (25,9 – 33) 5 | 10 | 0 | 0 | 90 | 0 | 2.49 | 5.34 |
| *Molossus molossus* | 36.4± 1.19 (35.2 – 38) 5 | 18.2± 0.30 (17.2. – 18.5) 05 | 100 | 0 | 0 | 0 | 0 | 3.08 | 13.53 |
| *Molossus rufus* | 46.6± 0.48 (45.3. – 48.3) 5 | 43.7± 2.6 (39.5– 46) 5 | 100 | 0 | 0 | 0 | 0 | 4.9 | 14.84 |
| *Micronycteris megalotis* | 33.3± 1.6 (31.2 – 36) 5 | 9± 1.7 (5. – 10) 5 | 80 | 0 | 0 | 20 | 0 | 0.83 | 4.17 |
| *Phyllostomus hastatus* | 77.5± 1.4 (75.2. – 80.3) 5 | 104± 4.7 (100 – 112) 5 | 40 | 0 | 50 | 10 | 0 | 4.7 | 16.6 |
| *Anoura caudifer* | 35.7± 0.7 (34.9. – 37.2) 5 | 10.3± 1.3 (8.3 – 10.9) 5 | 30 | 0 | 0 | 30 | 40 | 1.83 | 9.61 |
| *Artibeus planirostris* | 67.5± 4.7 (63.2 – 69.5) 5 | 76± 8.3 (64 – 84) 5 | 10 | 0 | 0 | 80 | 10 | 4.3 | 13.3 |
| *Myotis ruber* | 39.1± 1.2 (39 – 42.3) 5 | 9.2± 1.2 (8.2 –11) 5 | 100 | 0 | 0 | 0 | 0 | 1.33 | 9.44 |

Material Suplementario**:** CHANGES IN BAT DIVERSITY IN AGROSYSTEMS IN THE ATLANTIC RAIN FOREST, BRAZIL

Alan D. Pereira; Isaac P. de Lima; Nelio R. dos Reis.

Table S1. Values of the functional traits of the species of bats collected in five forest fragments of the Atlantic Forest in the southern region of Brazil, north of the state of Paraná. For the aspect ratio and wing loading we present mean± standard deviation, minimum and maximum values and n = number of individuals.. AR= aspect ratio, WL= wing loading; Dietary Specialization according to Wilman et al. (2014): I = Invertebrates-general, II = blood of vertebrates , III = Vertebrates , IV = Fruit, drupes, V = Nectar, pollen, plant exudates, gums.

Table S2. Contribution values of each characteristic measured for the clustering formation corresponding to species collected in the within forests and in the matrix of the fragments studied. AR= aspect ratio, WL= wing loading. Dietary Specialization, subdividida percentualmente em cinco categorias, sendo: Invertebrates-general (Diet-Inv); blood of vertebrates (Diet-Vend); Reptiles, snakes, amphibians, salamanders (Diet-Vect); Fruit, drupes (Diet-Fruit) e Nectar, pollen, plant exudates, gums (Diet-Nect) according to Wilman et al. (2014).

|  |  |  |
| --- | --- | --- |
| **INDOOR OF FOREST** | **Eta2 (**η2**)** | **P-value** |
| **Trait** |  |  |
| Weight | 0.9632893 | 3.55E-08 |
| Forearm lenght | 0.944099 | 3.56E-07 |
| WL | 0.840342 | 1.09E-04 |
| AR | 0.8100611 | 2.79E-04 |
| Diet.Inv | 0.7996766 | 3.71E-04 |
| Diet.Nect | 0.7542086 | 1.12E-03 |
| Diet.Vect | 0.6628287 | 6.03E-03 |
| Diet.Fruit | 0.5957896 | 1.57E-02 |
| **MATRIX** | **Eta2 (**η2**)** | **P-value** |
| **Trait** |  |  |
| Weight | 0.9796079 | 2.80E-06 |
| Forearm lenght | 0.9565132 | 3.92E-05 |
| Diet.Inv | 0.9510185 | 5.94E-05 |
| Diet.Vend | 0.8589505 | 2.31E-03 |
| Diet.Nect | 0.8402383 | 3.55E-03 |
| Diet.Fruit | 0.688196 | 3.43E-02 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***branch 1*** | **v.test** | **Mean in category** | **Overall mean** | **sd in category** | **Overall sd** | **p.value** |
| WL | 2.693001 | -0.45335 | -0.47372 | 0.007166 | 0.020006 | 0.007081 |
| Diet.Nect | 2.519187 | -0.52453 | -0.57325 | 0.035529 | 0.051173 | 0.011763 |
| Diet.Inv | 2.314589 | -0.46446 | -0.54037 | 0.06252 | 0.086775 | 0.020635 |
| Diet.Vect | 2.271735 | -0.53106 | -0.57526 | 0.044125 | 0.051476 | 0.023103 |
| Forearm\_lenght | 2.195195 | 2.384819 | 2.06144 | 0.043158 | 0.389752 | 0.02815 |
| Weight | -2.21048 | 0.080719 | 0.70444 | 0.163575 | 0.746539 | 0.027072 |
| **branch 2** |  |  |  |  |  |  |
| Weight | 3.109035 | 1.73312 | 0.70444 | 0.123549 | 0.746539 | 0.001877 |
| Diet.Vect | -2.03739 | -0.62174 | -0.57526 | 0.012165 | 0.051476 | 0.041611 |
| Diet.Inv | -2.06937 | -0.61996 | -0.54037 | 0.010503 | 0.086775 | 0.038511 |
| Diet.Nect | -2.16618 | -0.62238 | -0.57325 | 0.008198 | 0.051173 | 0.030297 |
| Diet.Fruit | -2.81133 | -0.60506 | -0.55097 | 0.010721 | 0.043413 | 0.004934 |
| WL | -3.06955 | -0.50093 | -0.47372 | 0.003185 | 0.020006 | 0.002144 |
| Forearm\_lenght | -3.47895 | 1.46049 | 2.06144 | 0.143727 | 0.389752 | 0.000503 |
| **branch 4** |  |  |  |  |  |  |
| AR | 2.804613 | 0.364905 | -0.0523 | 0.032487 | 0.218318 | 0.005038 |
| ***\*Branch 3 without significant traits*** |  |  |

Table S3. Functional dendrogram of the species sampled in within of forests studied this present study. Contribution values of each trait for the better chosen clustering solution according to silhouette analysis (Fig 2 a-b). The species corresponding to branchs formed in the clustering shown in the figure 2-e.

Table S4.Functional dendrogram of the species sampled in the matrix of forests studied this present study. Contribution values of each trait for the better chosen clustering solution according to silhouette analysis (Fig 2 a-b). The species corresponding to branchs formed in the clustering shown in the figure 2-f.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***branch 2*** | **v.test** | **Mean in category** | **Overall mean** | **sd in category** | **Overall sd** | **p.value** |
| Weight | 2.625754 | 1.631298 | 0.94618 | 0.10922 | 0.6237237 | 0.008646 |
| Forearm lenght | -2.92454 | 1.555501 | 1.975451 | 0.098463 | 0.3432587 | 0.00345 |
| ***branch 3*** |  |  |  |  |  |  |
| AR | 2.364005 | 0.344272 | -0.07024 | 0 | 0.1753415 | 0.018079 |
| ***branch 4*** |  |  |  |  |  |  |
| Diet.Inv | 3.071926 | -0.40409 | -0.58109 | 0.010812 | 0.08589593 | 0.002127 |
| Diet.Nect | 2.71168 | -0.48603 | -0.6075 | 0.017144 | 0.06677555 | 0.006694 |
| Diet.Vend | 2.654196 | -0.48603 | -0.60443 | 0.017144 | 0.06649707 | 0.00795 |
| Diet.Fruit | 2.011747 | -0.48603 | -0.58303 | 0.017144 | 0.07187615 | 0.044247 |
| Forearm lenght | 1.976076 | 2.430472 | 1.975451 | 0.011696 | 0.34325871 | 0.048146 |
| Weight | -2.51606 | -0.10656 | 0.94618 | 0.044762 | 0.62372375 | 0.011868 |
| ***\*Branch 1 without significant traits*** |