**Forest cover and environmental type shape functional diversity of insectivorous birds within the Brazilian Atlantic Forest**

Coletti-Manzoli et al. (2024) – *Environmental Conservation*

**Table S1**. List of functional traits of insectivorous birds. The table shows the name of the species, their code, diet traits (represented by d\_), foraging stratum (represented by forstrat\_), biomass (g), beak size (mm), wing size (mm), strategy migratory (0 = non-migrant and 1 = Migrant) and habitat preference (1 = Forest, 2 = Wetland, 3 = non-Forest, 4 = Forest + Wetland, 5 = Forest + non-Forest, 6 = non-Forest + Wetland and 7 = Forest + non-Forest + Wetland).

| Species | code | d\_inv | d\_vend | d\_vect | d\_vfish | d\_vunk | d\_fruit | d\_nect | d\_seed | d\_plant | forstrat\_water | forstrat\_g | forstrat\_ustory | forstrat\_midh | forstrat\_ca | forstrat\_aeri | biomass\_g | beak\_size | wing\_lenght | migration | habitat\_pref |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Anabazenops fuscus | anab\_fusc | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | 0.7 | 0 | 0 | 39 | 25.2 | 91.6 | 0 | 1 |
| Aramides saracura | aram\_sara | 0.7 | 0.1 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0.3 | 0.7 | 0 | 0 | 0 | 0 | 540 | 59.3 | 182 | 0 | 4 |
| Attila rufus | atti\_rufu | 0.6 | 0 | 0.2 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0.25 | 0.25 | 0.25 | 0.25 | 0 | 42.6 | 29.4 | 92 | 0 | 5 |
| Automolus leucophthalmus | auto\_leuc | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0.2 | 0 | 0 | 34.5 | 24 | 90.8 | 0 | 1 |
| Basileuterus culicivorus | basi\_culi | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0.3 | 0 | 0 | 10.5 | 12.8 | 59.5 | 0 | 5 |
| Batara cinerea | bata\_cine | 0.7 | 0.1 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 | 0.4 | 0 | 0 | 131 | 38.7 | 119.8 | 0 | 7 |
| Camptostoma obsoletum | camp\_obso | 0.7 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0.2 | 0 | 8.1 | 9.8 | 52.3 | 0 | 7 |
| Campylorhamphus falcularius | camp\_falc | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 42.6 | 71.3 | 99.5 | 0 | 5 |
| Cariama cristata | cari\_cris | 0.6 | 0.1 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0.6 | 0.4 | 0 | 0 | 0 | 1400 | 65.9 | 357.1 | 0 | 5 |
| Celeus flavescens | cele\_flav | 0.8 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0 | 0 | 0.2 | 0.6 | 0.2 | 0 | 147.3 | 28.5 | 140.2 | 0 | 5 |
| Certhiaxis cinnamomeus | cert\_cinn | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.33 | 0.33 | 0.33 | 0 | 15.2 | 15.8 | 59.3 | 0 | 4 |
| Chaetura meridionalis | chae\_meri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 22.2 | 8.9 | 131.7 | 1 | 5 |
| Colaptes campestris | cola\_camp | 0.9 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 158 | 39 | 156.3 | 0 | 5 |
| Colaptes melanochloros | cola\_mela | 0.8 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 127.3 | 30.6 | 134.2 | 0 | 5 |
| Colonia colonus | colo\_colo | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.7 | 0 | 0 | 18.3 | 12.4 | 80.8 | 0 | 5 |
| Conirostrum speciosum | coni\_spec | 0.7 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0.1 | 0 | 0.6 | 0.2 | 0.2 | 0 | 0 | 8.8 | 11.5 | 55.8 | 0 | 5 |
| Conopophaga lineata | cono\_line | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0.4 | 0 | 0 | 0 | 25.2 | 16.4 | 70 | 0 | 5 |
| Corythopis delalandi | cory\_dela | 0.9 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0.2 | 0 | 0 | 0 | 15 | 15.4 | 64.4 | 0 | 1 |
| Cranioleuca pallida | cran\_pall | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 11.5 | 15.5 | 61.2 | 0 | 1 |
| Cyanocorax chrysops | cyan\_chry | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.3 | 0.3 | 0 | 166 | 36 | 155.1 | 0 | 5 |
| Cyclarhis gujanensis | cycl\_guja | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 | 0.2 | 0 | 28.8 | 18 | 76.2 | 0 | 5 |
| Dendroma rufa | dend\_rufa | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 | 0 | 25 | 20.6 | 87.4 | 0 | 4 |
| Donacobius atricapilla | dona\_atri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 36.8 | 26.1 | 81.1 | 0 | 6 |
| Dromococcyx pavoninus | drom\_pavo | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 46.4 | 25 | 128.1 | 0 | 5 |
| Drymophila ferruginea | drym\_ferr | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.7 | 0 | 0 | 10.6 | 15.9 | 53 | 0 | 1 |
| Drymophila malura | drym\_malu | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 | 0.2 | 0 | 0 | 13 | 14.9 | 55.4 | 0 | 1 |
| Drymophila ochropyga | drym\_ochr | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 | 0.2 | 0 | 0 | 10.5 | 16.1 | 53 | 0 | 1 |
| Dryocopus lineatus | dryo\_line | 0.8 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0 | 0.2 | 0.2 | 0.6 | 0 | 0 | 183.2 | 41.3 | 177 | 0 | 5 |
| Dysithamnus mentalis | dysi\_ment | 0.9 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 | 0.2 | 0 | 14.9 | 15.8 | 59.8 | 0 | 5 |
| Empidonomus varius | empi\_vari | 0.6 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.7 | 0 | 0 | 27.1 | 17.5 | 96.8 | 1 | 5 |
| Furnarius figulus | furn\_figu | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 28 | 18.6 | 83.2 | 0 | 5 |
| Furnarius rufus | furn\_rufu | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0.7 | 0.3 | 0 | 0 | 0 | 46.4 | 23.4 | 95.8 | 0 | 3 |
| Galbula ruficauda | galb\_rufi | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 26.5 | 53.8 | 78.3 | 0 | 7 |
| Grallaria varia | gral\_vari | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 119 | 28.5 | 119.2 | 0 | 1 |
| Gubernetes yetapa | gube\_yeta | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0.2 | 0 | 0 | 0 | 68.4 | 26.5 | 125.6 | 0 | 7 |
| Habia rubica | habi\_rubi | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 | 0 | 0 | 32.5 | 18.1 | 92.5 | 0 | 1 |
| Heliobletus contaminatus | heli\_cont | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 14 | 14.6 | 69.1 | 0 | 1 |
| Hemitriccus diops | hemi\_diop | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 10 | 12.9 | 53.2 | 0 | 1 |
| Herpsilochmus rufimarginatus | herp\_rufi | 0.9 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 10.6 | 14.9 | 48.3 | 0 | 5 |
| Hirundinea ferruginea | hiru\_ferr | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.33 | 0.33 | 0.33 | 0 | 30.6 | 20.9 | 108.6 | 1 | 5 |
| Hylophilus poicilotis | hylo\_poic | 0.7 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.6 | 0.2 | 0 | 10.4 | 13.4 | 55.5 | 0 | 5 |
| Hypoedaleus guttatus | hypo\_gutt | 0.9 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 38.8 | 27.9 | 84.4 | 0 | 1 |
| Laterallus melanophaius | late\_mela | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 52.1 | 19.9 | 83.2 | 0 | 2 |
| Lathrotriccus euleri | lath\_eule | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 11.3 | 14.4 | 62.2 | 1 | 5 |
| Lepidocolaptes angustirostris | lepi\_angu | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 | 0 | 0 | 29.6 | 31.8 | 96.3 | 0 | 5 |
| Leptopogon amaurocephalus | lept\_amau | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 11.7 | 13.8 | 62.7 | 0 | 5 |
| Lochmias nematura | loch\_nema | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 22 | 23.9 | 68.6 | 0 | 1 |
| Lurocalis semitorquatus | luro\_semi | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0.1 | 0.2 | 75.9 | 15.5 | 185.4 | 1 | 1 |
| Machetornis rixosa | mach\_rixo | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 29.6 | 22.2 | 93.8 | 0 | 3 |
| Mackenziaena severa | mack\_seve | 0.6 | 0.2 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.4 | 0.3 | 0 | 0 | 51.8 | 26.7 | 91.2 | 0 | 5 |
| Malacoptila striata | mala\_stri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 44.1 | 28.6 | 95.2 | 0 | 5 |
| Megarynchus pitangua | mega\_pita | 0.7 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0.1 | 0 | 0 | 0 | 0.1 | 0.5 | 0.4 | 0 | 69.9 | 33.7 | 113.5 | 0 | 5 |
| Mesembrinibis cayennensis | mese\_caye | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 | 0.6 | 0 | 0 | 0 | 0 | 756 | 116.6 | 296.1 | 0 | 5 |
| Mimus saturninus | mimu\_satu | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 63.7 | 25.1 | 114.7 | 0 | 5 |
| Molothrus bonariensis | molo\_bona | 0.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 41.5 | 19.7 | 109.9 | 1 | 5 |
| Mustelirallus albicollis | must\_albi | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 100 | 46.1 | 115.5 | 0 | 6 |
| Myiarchus swainsoni | myia\_swai | 0.7 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 25.1 | 20.2 | 88.6 | 1 | 7 |
| Myiarchus tyrannulus | myia\_tyra | 0.7 | 0 | 0.1 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 0 | 0 | 35.5 | 23.2 | 92 | 1 | 7 |
| Myiopagis caniceps | myio\_cani | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10.5 | 11.2 | 59.4 | 1 | 1 |
| Myiopagis viridicata | myio\_viri | 0.6 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 11.5 | 11.8 | 60 | 1 | 5 |
| Myiophobus fasciatus | myio\_fasc | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 9.9 | 13.5 | 58.9 | 1 | 5 |
| Myiothlypis flaveola | myio\_flav | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0.4 | 0 | 0 | 0 | 13.2 | 14.6 | 66.3 | 0 | 1 |
| Myiothlypis leucoblephara | myio\_leuc | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 15.1 | 14.5 | 64.4 | 1 | 7 |
| Myrmoderus squamosus | myrm\_squa | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0.2 | 0 | 0 | 0 | 18.5 | 16.3 | 60 | 0 | 5 |
| Pachyramphus validus | pach\_vali | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 43 | 19.3 | 95.5 | 1 | 1 |
| Pachyramphus viridis | pach\_viri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 21 | 14.5 | 71.4 | 0 | 7 |
| Pardirallus nigricans | pard\_nigr | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0.4 | 0 | 0 | 0 | 0 | 217 | 52.8 | 128.8 | 0 | 2 |
| Phacellodomus ferrugineigula | phac\_ferr | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 24.5 | 19 | 61.7 | 0 | 7 |
| Phyllomyias griseocapilla | phyl\_gris | 0.6 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0.3 | 0 | 0 | 8 | 9.5 | 56.5 | 0 | 5 |
| Phylloscartes ventralis | phyl\_vent | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 8.3 | 12.6 | 53.1 | 0 | 1 |
| Piaya cayana | piay\_caya | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 102 | 32 | 145.5 | 0 | 5 |
| Platyrinchus mystaceus | plat\_myst | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0.2 | 0 | 0 | 9.7 | 13.1 | 55 | 0 | 5 |
| Poecilotriccus plumbeiceps | poec\_plum | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5.7 | 14 | 42.5 | 0 | 5 |
| Progne chalybea | prog\_chal | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 42.9 | 15.3 | 130.6 | 1 | 7 |
| Progne tapera | prog\_tape | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.2 | 0.2 | 0.3 | 32 | 15.8 | 128.3 | 1 | 6 |
| Psilorhamphus guttatus | psil\_gutt | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.6 | 0.3 | 0 | 0 | 11.3 | 15.9 | 49.1 | 0 | 5 |
| Pygochelidon cyanoleuca | pygo\_cyan | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 9.7 | 8.6 | 92.3 | 1 | 3 |
| Pyriglena leucoptera | pyri\_leuc | 0.9 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 | 0.2 | 0 | 0 | 28.8 | 18.9 | 78 | 0 | 5 |
| Saltator fuliginosus | salt\_fuli | 0.6 | 0 | 0 | 0 | 0 | 0.3 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0.4 | 0 | 50.5 | 25.8 | 105 | 0 | 1 |
| Saltator similis | salt\_simi | 0.6 | 0 | 0 | 0 | 0 | 0.3 | 0.1 | 0 | 0 | 0 | 0 | 0.7 | 0.3 | 0 | 0 | 43.3 | 20.3 | 99.8 | 0 | 5 |
| Sclerurus scansor | scle\_scan | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 36.9 | 25.2 | 88.1 | 0 | 1 |
| Serpophaga subcristata | serp\_subc | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.33 | 0.33 | 0.33 | 0 | 6.6 | 10.4 | 48.1 | 1 | 5 |
| Setophaga pitiayumi | seto\_piti | 0.7 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 1 | 0 | 6.8 | 12 | 52.7 | 0 | 5 |
| Sittasomus griseicapillus | sitt\_gris | 0.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 13.1 | 16.1 | 76.7 | 0 | 5 |
| Stelgidopteryx ruficollis | stel\_rufi | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 | 0 | 0 | 16.1 | 11.5 | 104.2 | 1 | 7 |
| Synallaxis frontalis | syna\_fron | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 0 | 0 | 14 | 13.7 | 57.3 | 1 | 5 |
| Synallaxis ruficapilla | syna\_rufi | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.6 | 0.2 | 0 | 0 | 13.8 | 15.3 | 55.9 | 0 | 5 |
| Synallaxis spixi | syna\_spix | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 0 | 0 | 12.6 | 13.7 | 51.3 | 0 | 3 |
| Tachyphonus coronatus | tach\_coro | 0.6 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.2 | 0 | 0 | 0 | 0.2 | 0.4 | 0.4 | 0 | 29.3 | 18.5 | 83.9 | 0 | 5 |
| Tapera naevia | tape\_naev | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.3 | 0.2 | 0 | 0 | 48.4 | 19.8 | 106 | 1 | 3 |
| Thamnophilus caerulescens | tham\_caer | 0.8 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0 | 0 | 0.6 | 0.4 | 0 | 0 | 21.1 | 17.1 | 69.4 | 0 | 7 |
| Thamnophilus doliatus | tham\_doli | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 | 0.4 | 0 | 0 | 27 | 19.2 | 71.2 | 0 | 5 |
| Thamnophilus ruficapillus | tham\_rufi | 0.9 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 0 | 20.4 | 18.6 | 67.3 | 0 | 5 |
| Theristicus caudatus | ther\_caud | 0.7 | 0.1 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1726 | 151.7 | 393 | 0 | 3 |
| Todirostrum cinereum | todi\_cine | 0.9 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.33 | 0.33 | 0.33 | 0 | 6.3 | 14.8 | 42.5 | 0 | 5 |
| Todirostrum poliocephalum | todi\_poli | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 | 0 | 0 | 7 | 13.8 | 42.2 | 0 | 5 |
| Tolmomyias sulphurescens | tolm\_sulp | 0.9 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.7 | 0 | 0 | 14.3 | 13.4 | 63 | 0 | 7 |
| Troglodytes aedon | trog\_aedo | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 1 | 0 | 0 | 0 | 10.9 | 14 | 51 | 0 | 5 |
| Trogon surrucura | trog\_surr | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 73.3 | 19.4 | 137.5 | 0 | 1 |
| Turdus albicollis | turd\_albi | 0.6 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0.8 | 0 | 0.2 | 0 | 0 | 54 | 22.7 | 110.3 | 0 | 5 |
| Turdus leucomelas | turd\_leuc | 0.7 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0.6 | 0.2 | 0.2 | 0 | 0 | 69.1 | 22.2 | 111.6 | 1 | 5 |
| Tyrannus melancholicus | tyra\_mela | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 37.4 | 23.5 | 108.8 | 1 | 7 |
| Tyrannus savana | tyra\_sava | 0.7 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 31.9 | 20.1 | 105.6 | 1 | 7 |
| Vanellus chilensis | vane\_chil | 0.9 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 0 | 0 | 0 | 327 | 35.1 | 226 | 1 | 6 |
| Veniliornis spilogaster | veni\_spil | 0.8 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 40.3 | 23.8 | 96 | 0 | 5 |
| Vireo chivi | vire\_chiv | 0.6 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 16.1 | 14 | 68 | 0 | 5 |
| Xenops rutilans | xeno\_ruti | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 0 | 11.2 | 13.3 | 65.8 | 0 | 1 |
| Xiphorhynchus fuscus | xiph\_fusc | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 21.8 | 26.9 | 77.7 | 0 | 5 |

**Table S2**. The percentage variation explained by each axis

| axis | pe | axis | pe | axis | pe | axis | pe |
| --- | --- | --- | --- | --- | --- | --- | --- |
| <int> | <dbl> | <int> | <dbl> | <int> | <dbl> | <int> | <dbl> |
| 1 | 22.9213486 | 28 | 8.8378E-08 | 55 | 2.37E-08 | 82 | 1.036E-08 |
| 2 | 20.1582152 | 29 | 7.345E-08 | 56 | 2.2602E-08 | 83 | 1.0224E-08 |
| 3 | 16.4522721 | 30 | 6.7448E-08 | 57 | 2.2098E-08 | 84 | 9.8565E-09 |
| 4 | 10.389232 | 31 | 6.4678E-08 | 58 | 2.1389E-08 | 85 | 9.7769E-09 |
| 5 | 7.77282965 | 32 | 5.8314E-08 | 59 | 2.0472E-08 | 86 | 9.5339E-09 |
| 6 | 4.77368713 | 33 | 5.4753E-08 | 60 | 2.0162E-08 | 87 | 9.4584E-09 |
| 7 | 4.05764876 | 34 | 5.0558E-08 | 61 | 1.8632E-08 | 88 | 8.9396E-09 |
| 8 | 3.1407073 | 35 | 5.0102E-08 | 62 | 1.8305E-08 | 89 | 8.7236E-09 |
| 9 | 2.6733802 | 36 | 4.6115E-08 | 63 | 1.7848E-08 | 90 | 8.3986E-09 |
| 10 | 1.98636879 | 37 | 4.3886E-08 | 64 | 1.7489E-08 | 91 | 7.6861E-09 |
| 11 | 1.65450349 | 38 | 4.1279E-08 | 65 | 1.6881E-08 | 92 | 7.5491E-09 |
| 12 | 1.25073161 | 39 | 3.9665E-08 | 66 | 1.6246E-08 | 93 | 7.3994E-09 |
| 13 | 1.02841914 | 40 | 3.8135E-08 | 67 | 1.5891E-08 | 94 | 7.2799E-09 |
| 14 | 0.60037108 | 41 | 3.7947E-08 | 68 | 1.5646E-08 | 95 | 7.2407E-09 |
| 15 | 0.37348513 | 42 | 3.629E-08 | 69 | 1.5435E-08 | 96 | 6.7329E-09 |
| 16 | 0.30248893 | 43 | 3.585E-08 | 70 | 1.5264E-08 | 97 | 6.1893E-09 |
| 17 | 0.20042984 | 44 | 3.3591E-08 | 71 | 1.4597E-08 | 98 | 5.6418E-09 |
| 18 | 0.12277375 | 45 | 3.2848E-08 | 72 | 1.3763E-08 | 99 | 5.4462E-09 |
| 19 | 0.0578973 | 46 | 3.0604E-08 | 73 | 1.3543E-08 | 100 | 4.9674E-09 |
| 20 | 0.03213023 | 47 | 3.0384E-08 | 74 | 1.2738E-08 | 101 | 4.8905E-09 |
| 21 | 0.0269912 | 48 | 2.9553E-08 | 75 | 1.2377E-08 | 102 | 4.775E-09 |
| 22 | 0.01135854 | 49 | 2.8411E-08 | 76 | 1.2159E-08 | 103 | 4.3536E-09 |
| 23 | 0.00935941 | 50 | 2.7319E-08 | 77 | 1.172E-08 | 104 | 4.3143E-09 |
| 24 | 0.00336851 | 51 | 2.6848E-08 | 78 | 1.1371E-08 | 105 | 2.3998E-09 |
| 25 | 1.5339E-07 | 52 | 2.5948E-08 | 79 | 1.1012E-08 | 106 | 1.2569E-09 |
| 26 | 1.3158E-07 | 53 | 2.5531E-08 | 80 | 1.0594E-08 | 107 | 5.8275E-10 |
| 27 | 1.0668E-07 | 54 | 2.4114E-08 | 81 | 1.0442E-08 | 108 | -2.7189E-15 |

**Table S3**. Models used for our GLMM analysis where “y” represents Functional Richness, Functional Evenness, Functional Divergence and Functional Dispersion.

| Number | Response Variable |  | Model |
| --- | --- | --- | --- |
| M0 | Functional Diversity  Indexes | ~ | 1 | random (Landscape ID) |
| M1 | Forest Cover | random (Landscape ID) |
| M2 | Environment type| random (Landscape ID) |
| M3 | Forest Cover + Environment type| random (Landscape ID) |

**Table S4**. Species list sorted by taxon and environment type.

| **Taxon** | **Environment** | | |
| --- | --- | --- | --- |
| **Pelecaniformes** | Pasture | Marsh | Forest |
| **Threskiornithidae** |  |  |  |
| *Mesembrinibis cayennensis* | 1 | 2 | 4 |
| Theristicus caudatus | 2 | 1 | 0 |
| **Gruiformes** |  |  |  |
| **Rallidae** |  |  |  |
| *Aramides saracura* | 1 | 5 | 8 |
| *Laterallus melanophaius* | 1 | 2 | 0 |
| *Mustelirallus albicollis* | 0 | 1 | 0 |
| *Pardirallus nigricans* | 0 | 3 | 0 |
| **Charadriiformes** |  |  |  |
| **Charadriidae** |  |  |  |
| *Vanellus chilensis* | 13 | 15 | 7 |
| **Cuculiformes** |  |  |  |
| **Cuculidae** |  |  |  |
| *Dromococcyx pavoninus* | 1 | 0 | 0 |
| *Piaya cayana* | 1 | 0 | 6 |
| *Tapera naevia* | 11 | 4 | 5 |
| **Caprimulgiformes** |  |  |  |
| **Caprimulgidae** |  |  |  |
| *Lurocalis semitorquatus* | 2 | 0 | 1 |
| **Apodiformes** |  |  |  |
| **Apodidae** |  |  |  |
| *Chaetura meridionalis* | 1 | 0 | 0 |
| **Trogoniformes** |  |  |  |
| **Trogonidae** |  |  |  |
| *Trogon surrucura* | 1 | 1 | 1 |
| **Galbuliformes** |  |  |  |
| **Galbulidae** |  |  |  |
| *Galbula ruficauda* | 2 | 0 | 0 |
| **Bucconidae** |  |  |  |
| *Malacoptila striata* | 1 | 4 | 3 |
| **Piciformes** |  |  |  |
| **Picidae** |  |  |  |
| *Celeus flavescens* | 4 | 3 | 5 |
| *Colaptes campestris* | 17 | 9 | 7 |
| *Colaptes melanochloros* | 2 | 1 | 0 |
| *Dryocopus lineatus* | 1 | 0 | 2 |
| *Veniliornis spilogaster* | 1 | 0 | 4 |
| **Cariamiformes** |  |  |  |
| **Cariamidae** |  |  |  |
| *Cariama cristata* | 10 | 7 | 9 |
| **Passeriformes** |  |  |  |
| **Thamnophilidae** |  |  |  |
| *Batara cinerea* | 0 | 0 | 1 |
| *Drymophila ferruginea* | 0 | 1 | 2 |
| *Drymophila malura* | 1 | 0 | 0 |
| *Drymophila ochropyga* | 0 | 1 | 1 |
| *Dysithamnus mentalis* | 13 | 7 | 16 |
| *Herpsilochmus rufimarginatus* | 6 | 5 | 13 |
| *Hypoedaleus guttatus* | 6 | 5 | 7 |
| *Mackenziaena severa* | 1 | 0 | 1 |
| *Myrmoderus squamosus* | 0 | 0 | 7 |
| *Pyriglena leucoptera* | 5 | 3 | 12 |
| *Thamnophilus caerulescens* | 13 | 8 | 16 |
| *Thamnophilus doliatus* | 1 | 0 | 0 |
| *Thamnophilus ruficapillus* | 1 | 1 | 0 |
| **Conopophagidae** |  |  |  |
| *Conopophaga lineata* |  |  |  |
| **Grallariidae** |  |  |  |
| *Grallaria varia* |  |  |  |
| **Rhinocryptidae** |  |  |  |
| *Psilorhamphus guttatus* | 0 | 0 | 2 |
| **Scleruridae** |  |  |  |
| *Sclerurus scansor* | 0 | 0 | 2 |
| **Dendrocolaptidae** |  |  |  |
| *Campylorhamphus falcularius* | 1 | 0 | 0 |
| *Lepidocolaptes angustirostris* | 1 | 0 | 0 |
| *Sittasomus griseicapillus* | 5 | 3 | 7 |
| *Xiphorhynchus fuscus* | 0 | 0 | 2 |
| **Xenopidae** |  |  |  |
| *Xenops rutilans* | 2 | 0 | 7 |
| **Furnariidae** |  |  |  |
| *Anabazenops fuscus* | 1 | 0 | 0 |
| *Automolus leucophthalmus* | 4 | 1 | 9 |
| *Certhiaxis cinnamomeus* | 0 | 3 | 2 |
| *Cranioleuca pallida* | 5 | 5 | 3 |
| *Dendroma rufa* | 0 | 1 | 0 |
| *Furnarius figulus* | 0 | 0 | 1 |
| *Furnarius rufus* | 14 | 14 | 9 |
| *Heliobletus contaminatus* | 0 | 0 | 2 |
| *Lochmias nematura* | 5 | 3 | 6 |
| *Phacellodomus ferrugineigula* | 0 | 6 | 0 |
| *Synallaxis frontalis* | 2 | 1 | 1 |
| *Synallaxis ruficapilla* | 2 | 3 | 8 |
| *Synallaxis spixi* | 17 | 12 | 9 |
| **Tityridae** |  |  |  |
| *Pachyramphus validus* | 5 | 6 | 4 |
| *Pachyramphus viridis* | 0 | 1 | 0 |
| **Platyrinchidae** |  |  |  |
| *Platyrinchus mystaceus* | 3 | 1 | 11 |
| **Rhynchocyclidae** |  |  |  |
| *Corythopis delalandi* | 1 | 0 | 5 |
| *Hemitriccus diops* | 0 | 0 | 1 |
| *Leptopogon amaurocephalus* | 3 | 1 | 12 |
| *Phylloscartes ventralis* | 0 | 0 | 1 |
| *Poecilotriccus plumbeiceps* | 5 | 2 | 1 |
| *Todirostrum cinereum* | 4 | 1 | 0 |
| *Todirostrum poliocephalum* | 8 | 4 | 9 |
| *Tolmomyias sulphurescens* | 10 | 8 | 19 |
| **Tyrannidae** |  |  |  |
| *Attila rufus* | 0 | 0 | 2 |
| *Camptostoma obsoletum* | 13 | 14 | 11 |
| *Colonia colonus* | 3 | 2 | 0 |
| *Empidonomus varius* | 5 | 7 | 4 |
| *Gubernetes yetapa* | 0 | 1 | 0 |
| *Hirundinea ferruginea* | 1 | 0 | 0 |
| *Lathrotriccus euleri* | 3 | 1 | 13 |
| *Machetornis rixosa* | 1 | 4 | 0 |
| *Megarynchus pitangua* | 7 | 9 | 3 |
| *Myiarchus swainsoni* | 10 | 8 | 12 |
| *Myiarchus tyrannulus* | 7 | 7 | 3 |
| *Myiopagis caniceps* | 1 | 0 | 1 |
| *Myiopagis viridicata* | 1 | 0 | 2 |
| *Myiophobus fasciatus* | 11 | 10 | 1 |
| *Phyllomyias griseocapilla* | 1 | 0 | 0 |
| *Serpophaga subcristata* | 3 | 1 | 0 |
| *Tyrannus melancholicus* | 18 | 15 | 10 |
| *Tyrannus savana* | 2 | 0 | 0 |
| **Vireonidae** |  |  |  |
| *Cyclarhis gujanensis* | 19 | 15 | 20 |
| *Hylophilus poicilotis* | 1 | 0 | 0 |
| *Vireo chivi* | 19 | 16 | 22 |
| **Corvidae** |  |  |  |
| *Cyanocorax chrysops* | 7 | 3 | 6 |
| **Hirundinidae** |  |  |  |
| *Progne chalybea* | 0 | 1 | 0 |
| *Progne tapera* | 2 | 0 | 0 |
| *Pygochelidon cyanoleuca* | 4 | 0 | 0 |
| *Stelgidopteryx ruficollis* | 3 | 0 | 0 |
| **Troglodytidae** |  |  |  |
| *Troglodytes aedon* | 19 | 16 | 7 |
| **Donacobiidae** |  |  |  |
| *Donacobius atricapilla* | 0 | 1 | 0 |
| **Turdidae** |  |  |  |
| *Turdus albicollis* | 7 | 2 | 12 |
| *Turdus leucomelas* | 18 | 12 | 17 |
| **Mimidae** |  |  |  |
| *Mimus saturninus* | 3 | 3 | 0 |
| **Parulidae** |  |  |  |
| *Basileuterus culicivorus* | 16 | 12 | 22 |
| *Myiothlypis flaveola* | 1 | 1 | 2 |
| *Myiothlypis leucoblephara* | 7 | 4 | 19 |
| *Setophaga pitiayumi* | 11 | 5 | 11 |
| **Icteridae** |  |  |  |
| *Molothrus bonariensis* | 0 | 2 | 0 |
| **Thraupidae** |  |  |  |
| *Conirostrum speciosum* | 6 | 4 | 10 |
| *Saltator fuliginosus* | 1 | 0 | 0 |
| *Saltator similis* | 9 | 5 | 11 |
| *Tachyphonus coronatus* | 12 | 12 | 14 |
| **Cardinalidae** |  |  |  |
| *Habia rubica* | 2 | 1 | 7 |
|  |  |  |  |
| **Order Number** | **11** |  |  |
| **Family Number** | **34** |  |  |
| **Species Number** | **108** |  |  |

Functional Diversity Indexes, forest cover and environment type

**Table S5**. Table containing for each landscape the functional diversity indices, forest cover at different scales, and the type of environment. In addition, there is also information about the latitude and longitude of the landscape centroid.

| paisagem | env | Flo\_2km | Flo\_1km | Flo\_500m | Flo\_200m | Flo\_100m | long | lat | FDiv | FEve | FRic | FDis |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| LEEC02 | Pasture | 0.304517 | 0.3967 | 0.526339 | 0.424677 | 0.400955 | -46.443 | -23.0352 | 0.68862 | 0.839123 | 0.09557 | 3.935275 |
| LEEC03 | Pasture | 0.835378 | 0.961299 | 0.923067 | 0.845771 | 0.813842 | -46.5226 | -23.1859 | 0.717446 | 0.843959 | 0.077049 | 3.710266 |
| LEEC05 | Pasture | 0.499396 | 0.381393 | 0.296368 | 0.129552 | 0.090692 | -46.2858 | -23.2956 | 0.717566 | 0.861697 | 0.117439 | 4.735454 |
| LEEC06 | Pasture | 0.424842 | 0.424544 | 0.39364 | 0.063881 | 0.026253 | -46.488 | -23.1617 | 0.655513 | 0.842289 | 0.294528 | 4.594032 |
| LEEC08 | Pasture | 0.207174 | 0.074306 | 0.062737 | 0.005771 | 0 | -46.2089 | -22.9755 | 0.720141 | 0.863794 | 0.316641 | 5.428454 |
| LEEC09 | Pasture | 0.321052 | 0.217975 | 0.180985 | 0.300498 | 0.227526 | -46.2322 | -23.0622 | 0.661475 | 0.797178 | 0.300138 | 4.481615 |
| LEEC15 | Pasture | 0.202376 | 0.279108 | 0.242576 | 0.257114 | 0.126492 | -46.6283 | -22.9574 | 0.698325 | 0.829198 | 0.204845 | 4.694311 |
| LEEC18 | Pasture | 0.451977 | 0.506945 | 0.672598 | 0.938109 | 0.809865 | -46.672 | -23.2933 | 0.697088 | 0.801782 | 0.258536 | 4.094617 |
| LEEC21 | Pasture | 0.245887 | 0.335583 | 0.228284 | 0.146468 | 0 | -46.5162 | -23.0424 | 0.686441 | 0.843991 | 0.656327 | 5.121739 |
| LEEC23 | Pasture | 0.420787 | 0.395251 | 0.477703 | 0.432836 | 0.116945 | -46.1763 | -23.1013 | 0.628209 | 0.951381 | 0.030344 | 4.514816 |
| LEEC24 | Pasture | 0.317525 | 0.447588 | 0.582201 | 0.456119 | 0.220366 | -46.681 | -23.1305 | 0.681868 | 0.843676 | 0.248642 | 4.409465 |
| LEEC26 | Pasture | 0.488476 | 0.575918 | 0.626444 | 0.253134 | 0.019889 | -46.3279 | -23.1772 | 0.701489 | 0.826543 | 0.227629 | 4.661023 |
| LEEC33 | Pasture | 0.22211 | 0.206035 | 0.24022 | 0.056517 | 0.181384 | -46.6465 | -23.1171 | 0.70736 | 0.823767 | 0.290618 | 4.7785 |
| LEEC36 | Pasture | 0.395794 | 0.211313 | 0.209632 | 0.044577 | 0 | -46.5482 | -23.1797 | 0.702356 | 0.861006 | 0.294471 | 4.866199 |
| LEEC37 | Pasture | 0.332685 | 0.65531 | 0.836585 | 0.891343 | 0.588703 | -46.5681 | -22.994 | 0.750104 | 0.677958 | 0.000844 | 3.778861 |
| LEEC40 | Pasture | 0.718424 | 0.720797 | 0.658401 | 0.358408 | 0.050915 | -46.4671 | -23.2519 | 0.698476 | 0.876313 | 0.110309 | 4.83351 |
| LEEC41 | Pasture | 0.523828 | 0.651713 | 0.592482 | 0.588657 | 0.254574 | -46.6342 | -23.3134 | 0.715914 | 0.818145 | 0.156212 | 4.841746 |
| LEEC42 | Pasture | 0.399708 | 0.557021 | 0.715695 | 0.75801 | 0.558473 | -46.2488 | -23.3334 | 0.732075 | 0.83307 | 0.073156 | 3.953104 |
| LEEC43 | Pasture | 0.505106 | 0.507232 | 0.286724 | 0.028856 | 0 | -46.2764 | -23.2025 | 0.676369 | 0.828407 | 0.172266 | 4.526586 |
| LEEC45 | Pasture | 0.259866 | 0.149536 | 0.06471 | 0.08597 | 0 | -46.2112 | -22.956 | 0.783516 | 0.83555 | 0.057613 | 4.913475 |
| LEEC48 | Pasture | 0.336139 | 0.531398 | 0.659961 | 0.238806 | 0 | -46.1776 | -22.9872 | 0.691561 | 0.851347 | 0.182351 | 4.009778 |
| LEEC49 | Pasture | 0.621911 | 0.585987 | 0.314034 | 0.434627 | 0.349244 | -46.4682 | -23.2766 | 0.712115 | 0.851533 | 0.12997 | 4.257668 |
| LEEC02 | Marsh | 0.302544 | 0.337167 | 0.181208 | 0.037413 | 0.003978 | -46.4468 | -23.0404 | 0.733355 | 0.859272 | 0.233562 | 5.647039 |
| LEEC03 | Marsh | 0.851376 | 0.966863 | 0.923067 | 0.584478 | 0.230708 | -46.5234 | -23.188 | 0.72415 | 0.840286 | 0.138999 | 4.35051 |
| LEEC05 | Marsh | 0.512901 | 0.404835 | 0.418563 | 0.413731 | 0.372315 | -46.2875 | -23.2963 | 0.696283 | 0.933862 | 0.020382 | 3.800205 |
| LEEC06 | Marsh | 0.391262 | 0.357346 | 0.173568 | 0.219104 | 0.21241 | -46.4863 | -23.1633 | 0.693976 | 0.821591 | 0.215662 | 4.771003 |
| LEEC08 | Marsh | 0.186423 | 0.075508 | 0.113728 | 0.134925 | 0.066826 | -46.2069 | -22.9766 | 0.709867 | 0.836325 | 0.62819 | 5.49313 |
| LEEC09 | Marsh | 0.356395 | 0.296293 | 0.26648 | 0.378507 | 0.599045 | -46.2358 | -23.0633 | 0.719076 | 0.82326 | 0.230926 | 5.359205 |
| LEEC15 | Marsh | 0.204475 | 0.286614 | 0.127351 | 0 | 0 | -46.6298 | -22.9556 | 0.732417 | 0.851652 | 0.135731 | 5.231842 |
| LEEC18 | Marsh | 0.451438 | 0.579572 | 0.413948 | 0.344478 | 0.43755 | -46.6706 | -23.297 | 0.639 | 0.762395 | 0.112517 | 4.702779 |
| LEEC21 | Marsh | 0.249655 | 0.397997 | 0.31553 | 0.269652 | 0.366746 | -46.5147 | -23.0435 | 0.683803 | 0.808714 | 0.526387 | 4.972605 |
| LEEC23 | Marsh | 0.400086 | 0.303576 | 0.193462 | 0.153433 | 0.129674 | -46.1805 | -23.1021 | 0.749899 | 0.905632 | 0.008983 | 3.664466 |
| LEEC24 | Marsh | 0.323864 | 0.388485 | 0.586816 | 0.584677 | 0.592681 | -46.6816 | -23.1282 | 0.72694 | 0.895753 | 0.008123 | 3.520714 |
| LEEC26 | Marsh | 0.490429 | 0.562521 | 0.42512 | 0.391443 | 0.516309 | -46.3274 | -23.1794 | 0.689717 | 0.807175 | 0.254419 | 4.823262 |
| LEEC33 | Marsh | 0.226487 | 0.178518 | 0.183595 | 0.179701 | 0.114558 | -46.6473 | -23.119 | 0.742345 | 0.790947 | 0.179564 | 4.903744 |
| LEEC36 | Marsh | 0.425799 | 0.215531 | 0.144571 | 0.156418 | 0.303103 | -46.5461 | -23.1792 | 0.747531 | 0.817482 | 0.116627 | 4.946606 |
| LEEC40 | Marsh | 0.735334 | 0.725087 | 0.687208 | 0.534925 | 0.349244 | -46.4682 | -23.2479 | 0.683423 | 0.778082 | 0.276049 | 5.103573 |
| LEEC41 | Marsh | 0.498469 | 0.526853 | 0.556323 | 0.707264 | 0.752586 | -46.6405 | -23.3132 | 0.661155 | 0.782961 | 0.200258 | 4.473293 |
| LEEC42 | Marsh | 0.387555 | 0.538267 | 0.585447 | 0.598806 | 0.583134 | -46.2472 | -23.3351 | 0.705667 | 0.827927 | 0.060392 | 4.405558 |
| LEEC43 | Marsh | 0.508276 | 0.456901 | 0.39781 | 0.058309 | 0.004773 | -46.2793 | -23.2004 | 0.735367 | 0.839789 | 0.231702 | 5.277093 |
| LEEC45 | Marsh | 0.24374 | 0.13477 | 0.08228 | 0.036816 | 0 | -46.2091 | -22.9563 | 0.69384 | 0.82846 | 0.648602 | 5.153501 |
| LEEC48 | Marsh | 0.35878 | 0.438768 | 0.590254 | 0.445373 | 0.315831 | -46.1731 | -22.989 | 0.683253 | 0.826585 | 0.153789 | 4.573535 |
| LEEC49 | Marsh | 0.606307 | 0.551083 | 0.341089 | 0.19403 | 0.111376 | -46.4662 | -23.2754 | 0.745559 | 0.854967 | 0.03109 | 3.631447 |
| LEEC02 | Forest | 0.271242 | 0.2933 | 0.506987 | 0.839801 | 0.999204 | -46.4436 | -23.0312 | 0.687017 | 0.824583 | 0.075996 | 3.699816 |
| LEEC03 | Forest | 0.857894 | 0.965088 | 0.909699 | 0.910448 | 1 | -46.5239 | -23.1899 | 0.706936 | 0.873535 | 0.055213 | 3.697293 |
| LEEC05 | Forest | 0.44306 | 0.544118 | 0.725212 | 0.989055 | 1 | -46.2832 | -23.2879 | 0.694428 | 0.815581 | 0.158156 | 4.065417 |
| LEEC06 | Forest | 0.492411 | 0.565228 | 0.636948 | 0.962587 | 1 | -46.4907 | -23.1639 | 0.720591 | 0.822809 | 0.061334 | 3.856707 |
| LEEC08 | Forest | 0.161661 | 0.082958 | 0.120954 | 0.184279 | 0.661098 | -46.2052 | -22.9746 | 0.642843 | 0.75787 | 0.212634 | 4.226012 |
| LEEC09 | Forest | 0.386897 | 0.510853 | 0.641054 | 0.974129 | 1 | -46.2413 | -23.065 | 0.677533 | 0.833145 | 0.058492 | 3.638114 |
| LEEC15 | Forest | 0.225958 | 0.228283 | 0.515676 | 1 | 1 | -46.6278 | -22.9616 | 0.706048 | 0.814342 | 0.116626 | 3.743211 |
| LEEC18 | Forest | 0.448991 | 0.544818 | 0.575453 | 0.559801 | 0.747812 | -46.6706 | -23.2946 | 0.792216 | 0.834197 | 0.005752 | 2.925873 |
| LEEC21 | Forest | 0.255141 | 0.308392 | 0.234777 | 0.785274 | 1 | -46.5138 | -23.0409 | 0.695901 | 0.782943 | 0.306316 | 4.683102 |
| LEEC23 | Forest | 0.423536 | 0.439118 | 0.613139 | 0.65592 | 0.77327 | -46.1737 | -23.1011 | 0.686108 | 0.856333 | 0.069438 | 3.622977 |
| LEEC24 | Forest | 0.30863 | 0.362647 | 0.579241 | 0.904279 | 1 | -46.6782 | -23.1268 | 0.785631 | 0.844489 | 0.015627 | 3.528406 |
| LEEC26 | Forest | 0.479505 | 0.555962 | 0.594423 | 0.897114 | 1 | -46.3296 | -23.1794 | 0.677269 | 0.837646 | 0.199709 | 4.428418 |
| LEEC33 | Forest | 0.206892 | 0.262431 | 0.341821 | 0.814527 | 1 | -46.6434 | -23.1161 | 0.685239 | 0.829131 | 0.168833 | 4.135687 |
| LEEC36 | Forest | 0.537723 | 0.656305 | 0.599325 | 0.86607 | 0.996818 | -46.5378 | -23.1828 | 0.690805 | 0.809104 | 0.295044 | 4.151585 |
| LEEC37 | Forest | 0.335204 | 0.635546 | 0.766018 | 0.981891 | 1 | -46.5675 | -22.9965 | 0.67482 | 0.801286 | 0.205341 | 4.386695 |
| LEEC40 | Forest | 0.728195 | 0.747232 | 0.681192 | 0.977711 | 1 | -46.4705 | -23.2475 | 0.657592 | 0.799245 | 0.313791 | 4.252343 |
| LEEC41 | Forest | 0.507655 | 0.711038 | 0.793615 | 0.739104 | 0.795545 | -46.632 | -23.3157 | 0.66745 | 0.768049 | 0.094687 | 4.329181 |
| LEEC42 | Forest | 0.396148 | 0.550836 | 0.623261 | 0.458507 | 0.93397 | -46.2488 | -23.3351 | 0.698467 | 0.840435 | 0.082078 | 4.126817 |
| LEEC43 | Forest | 0.528259 | 0.490786 | 0.577713 | 0.612935 | 0.968178 | -46.2737 | -23.2009 | 0.724502 | 0.806112 | 0.144031 | 4.124375 |
| LEEC45 | Forest | 0.260749 | 0.167151 | 0.0974 | 0.242388 | 0.656325 | -46.2105 | -22.9543 | 0.693482 | 0.866482 | 0.045559 | 3.616686 |
| LEEC48 | Forest | 0.315715 | 0.400871 | 0.553204 | 0.770149 | 0.993636 | -46.1738 | -22.9852 | 0.675 | 0.806866 | 0.322242 | 4.516015 |
| LEEC49 | Forest | 0.606844 | 0.569502 | 0.408791 | 0.541095 | 0.828958 | -46.4681 | -23.274 | 0.734058 | 0.820578 | 0.070127 | 3.636545 |

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