

Supplementary Material - Mujica et al.

1 Adding randomly 20% of misassignment of mycorrhizal type

2 Analysis per genera including all families

2.1 Boxplots

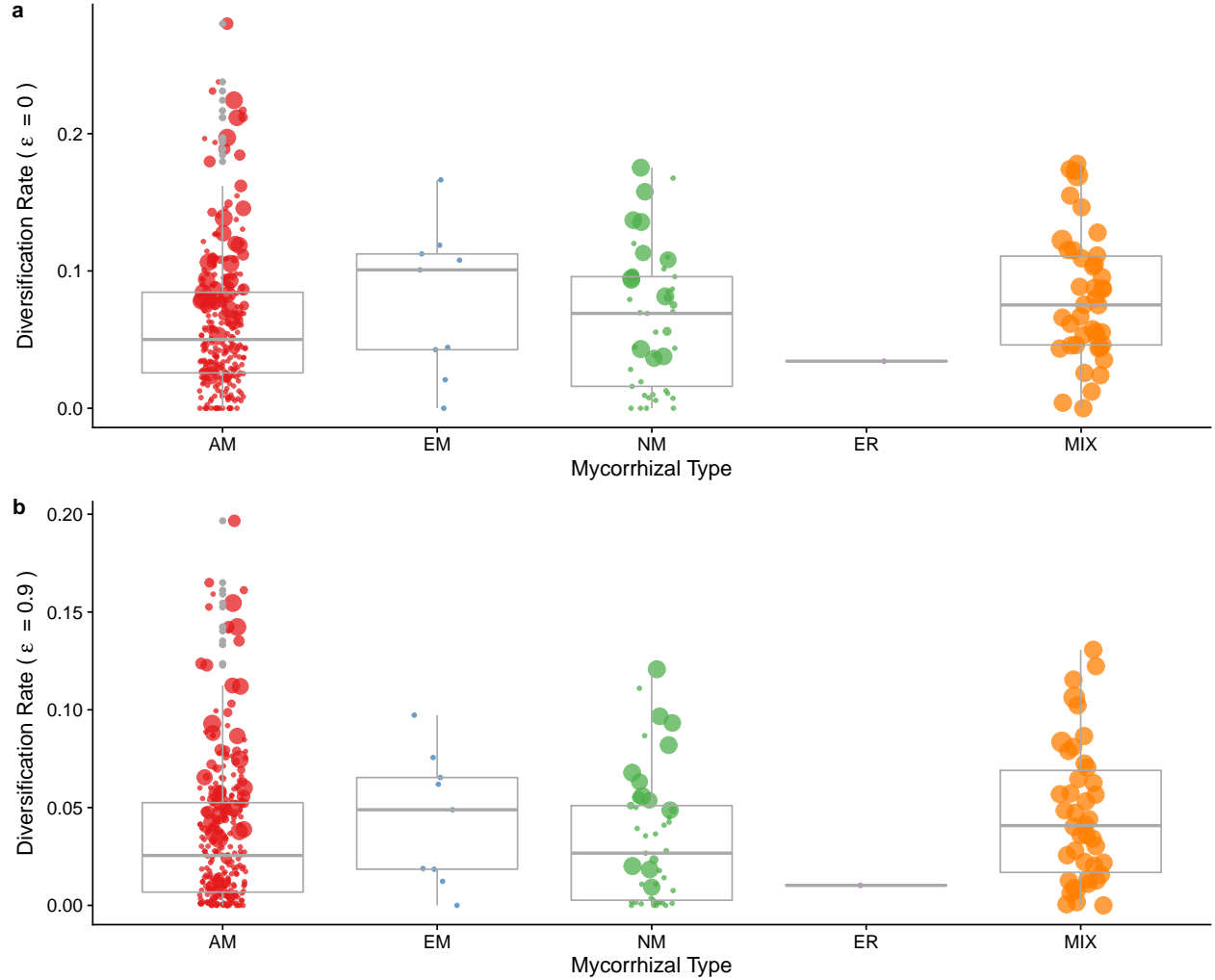


Figure 1: Relationship between mycorrhizal type and diversification rates. a) diversification rate estimated with (relative extinction fraction) = 0 and b) diversification rate estimated with = 0.9. AM: Arbuscular mycorrhiza, EM: Ectomycorrhiza, NM: non-mycorrhizal and MIX (families with no dominance of any specific mycorrhizal association). The size of the points indicates the Mycorrhizal Type Diversity Index value for each lineage, indicating a predominance of larger indices with higher diversification rates.

2.2 Scatterplots

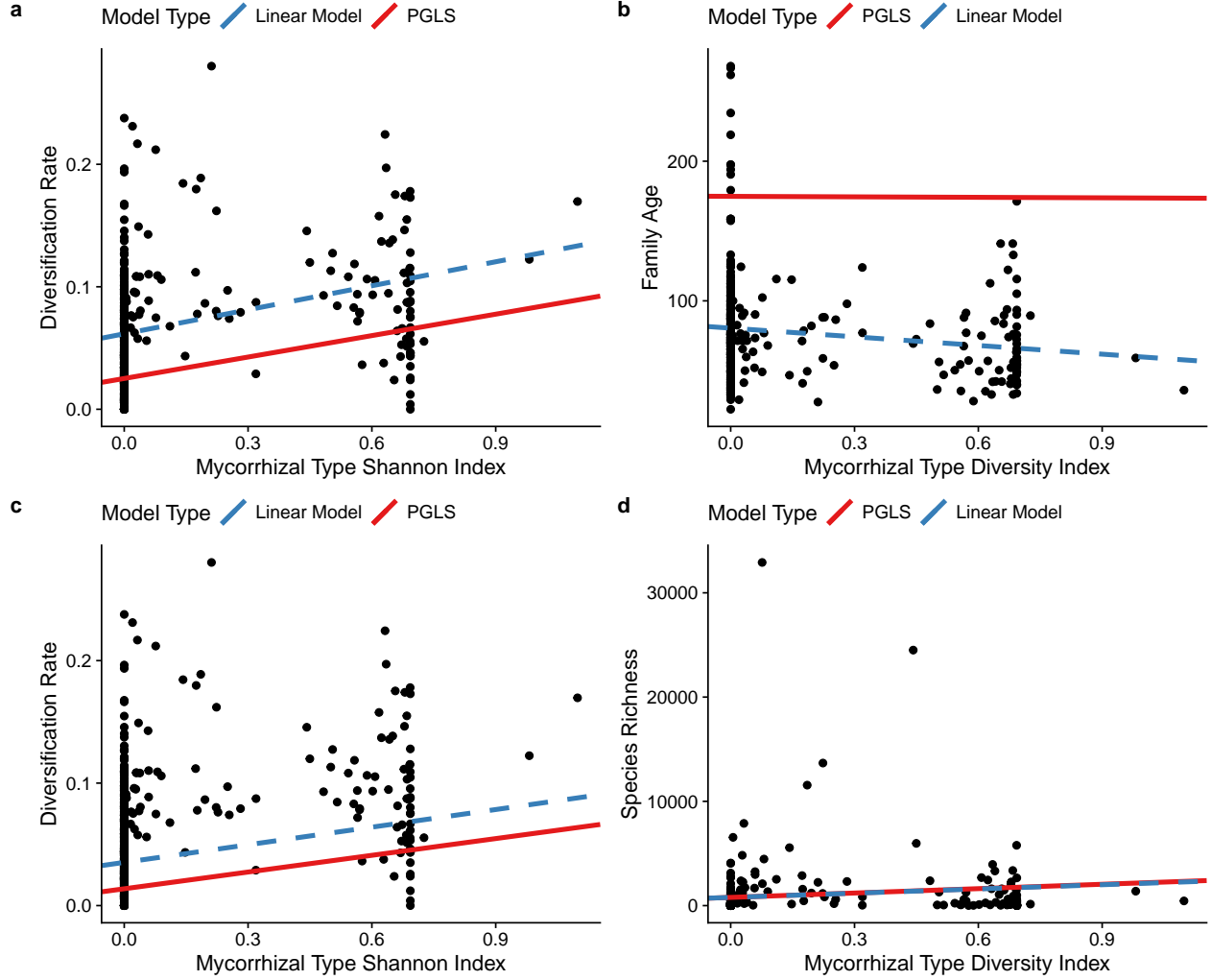


Figure 2: Scatterplots showing the relationship between mycorrhizal diversity index and diversification rates (a and c), species richness (b) and age family (d). Diversification rates were estimated with (relative extinction fraction) = 0 (a) and with = 0.9 (c). The red and blue lines indicate the results of a linear model and a phylogenetic generalized least squares (PGLS) fit, respectively.

3 Different thresholds for main mycorrhizal type

3.1 Family classification based on different thresholds

Table 1: Mycorrhizal type assigned to each family based on 4 different percentage thresholds (50, 60, 80 and 100)

| | Family | 0.5 | 0.6 | 0.8 | 1 |
|---|---------------|-----|-----|-----|-----|
| 1 | Acanthaceae | AM | AM | MIX | MIX |
| 2 | Achariaceae | AM | AM | AM | AM |
| 5 | Actinidiaceae | AM | AM | AM | AM |
| 6 | Adoxaceae | AM | AM | AM | MIX |

| | | | | | |
|----|--------------------|-----|-----|-----|-----|
| 7 | Aextoxicaceae | AM | AM | AM | AM |
| 8 | Aizoaceae | NM | MIX | MIX | MIX |
| 9 | Akaniaceae | AM | AM | AM | AM |
| 11 | Alseuosmiaceae | AM | AM | AM | AM |
| 12 | Alstroemeriaceae | AM | AM | AM | AM |
| 13 | Altingiaceae | AM | AM | AM | AM |
| 14 | Amaranthaceae | NM | MIX | MIX | MIX |
| 15 | Amaryllidaceae | AM | AM | AM | MIX |
| 16 | Amborellaceae | AM | AM | AM | AM |
| 18 | Anacardiaceae | AM | AM | AM | AM |
| 20 | Ancistrocladaceae | AM | AM | AM | AM |
| 21 | Anisophylleaceae | AM | AM | AM | AM |
| 22 | Annonaceae | AM | AM | AM | AM |
| 24 | Aphloiaceae | AM | AM | AM | AM |
| 25 | Apiaceae | AM | AM | AM | MIX |
| 26 | Apocynaceae | AM | AM | AM | MIX |
| 27 | Apodanthaceae | NM | NM | NM | NM |
| 28 | Aponogetonaceae | MIX | MIX | MIX | MIX |
| 29 | Aquifoliaceae | AM | AM | AM | AM |
| 30 | Araceae | AM | MIX | MIX | MIX |
| 31 | Araliaceae | AM | AM | AM | MIX |
| 32 | Araucariaceae | AM | AM | AM | AM |
| 33 | Arecaceae | AM | AM | AM | MIX |
| 34 | Argophyllaceae | AM | AM | AM | AM |
| 35 | Aristolochiaceae | AM | AM | MIX | MIX |
| 36 | Asparagaceae | AM | AM | AM | MIX |
| 37 | Asteliaceae | AM | AM | AM | AM |
| 39 | Atherospermataceae | AM | AM | AM | AM |
| 40 | Austrobaileyaceae | AM | AM | AM | AM |
| 41 | Balanopaceae | AM | AM | AM | AM |
| 42 | Balanophoraceae | NM | NM | NM | NM |
| 43 | Balsaminaceae | AM | AM | AM | AM |
| 45 | Barbeyaceae | AM | AM | AM | AM |
| 46 | Basellaceae | AM | AM | AM | AM |
| 48 | Begoniaceae | AM | AM | AM | AM |
| 49 | Berberidaceae | AM | AM | AM | AM |
| 51 | Betulaceae | EM | EM | EM | EM |
| 52 | Biebersteiniaceae | AM | AM | AM | AM |
| 53 | Bignoniaceae | AM | AM | AM | MIX |
| 54 | Bixaceae | AM | AM | AM | AM |
| 55 | Blandfordiaceae | AM | AM | AM | AM |
| 56 | Bonnetiaceae | AM | AM | AM | AM |
| 57 | Boraginaceae | AM | AM | MIX | MIX |
| 58 | Boryaceae | AM | AM | AM | AM |
| 59 | Brassicaceae | NM | NM | NM | NM |
| 60 | Bromeliaceae | NM | NM | MIX | MIX |
| 61 | Brunelliaceae | AM | AM | AM | AM |
| 62 | Bruniaceae | AM | AM | AM | AM |
| 63 | Burmanniaceae | AM | AM | AM | AM |
| 64 | Burseraceae | AM | AM | AM | MIX |
| 65 | Butomaceae | NM | NM | NM | NM |

| | | | | | |
|-----|-------------------|----|-----|-----|-----|
| 66 | Buxaceae | AM | AM | AM | AM |
| 67 | Byblidaceae | NM | NM | NM | NM |
| 68 | Cabombaceae | NM | NM | NM | NM |
| 69 | Cactaceae | AM | AM | AM | MIX |
| 70 | Calceolariaceae | AM | AM | AM | AM |
| 71 | Calophyllaceae | AM | AM | AM | AM |
| 72 | Calycanthaceae | AM | AM | AM | AM |
| 73 | Calyceraceae | AM | AM | AM | AM |
| 74 | Campanulaceae | AM | AM | AM | MIX |
| 75 | Campynemataceae | AM | AM | AM | AM |
| 76 | Canellaceae | AM | AM | AM | AM |
| 77 | Cannabaceae | AM | AM | AM | AM |
| 78 | Cannaceae | AM | AM | AM | AM |
| 79 | Capparaceae | AM | AM | MIX | MIX |
| 80 | Caprifoliaceae | AM | AM | AM | AM |
| 81 | Cardiopteridaceae | AM | AM | AM | AM |
| 82 | Caricaceae | AM | AM | AM | AM |
| 83 | Carlemanniaceae | AM | AM | AM | AM |
| 84 | Caryocaraceae | AM | AM | AM | AM |
| 85 | Caryophyllaceae | NM | NM | MIX | MIX |
| 86 | Casuarinaceae | AM | MIX | MIX | MIX |
| 87 | Celastraceae | AM | AM | AM | MIX |
| 89 | Cephalotaceae | NM | NM | NM | NM |
| 90 | Ceratophyllaceae | NM | NM | NM | NM |
| 91 | Cercidiphyllaceae | AM | AM | AM | AM |
| 92 | Chloranthaceae | AM | AM | AM | AM |
| 93 | Chrysobalanaceae | AM | AM | AM | AM |
| 94 | Circaeasteraceae | AM | AM | AM | AM |
| 95 | Cistaceae | EM | EM | EM | EM |
| 96 | Cleomaceae | AM | MIX | MIX | MIX |
| 97 | Clethraceae | AM | AM | AM | AM |
| 98 | Clusiaceae | AM | AM | AM | AM |
| 99 | Colchicaceae | AM | AM | AM | AM |
| 100 | Columelliaceae | AM | AM | AM | AM |
| 101 | Combretaceae | AM | AM | AM | AM |
| 102 | Commelinaceae | NM | MIX | MIX | MIX |
| 103 | Asteraceae | AM | AM | AM | MIX |
| 104 | Connaraceae | AM | AM | AM | AM |
| 105 | Convolvulaceae | AM | AM | MIX | MIX |
| 106 | Coriariaceae | AM | AM | AM | AM |
| 107 | Cornaceae | AM | AM | AM | AM |
| 108 | Corsiaceae | AM | AM | AM | AM |
| 109 | Corynocarpaceae | AM | AM | AM | AM |
| 110 | Costaceae | AM | AM | AM | AM |
| 111 | Crassulaceae | NM | NM | MIX | MIX |
| 113 | Ctenolophonaceae | AM | AM | AM | AM |
| 114 | Cucurbitaceae | AM | AM | AM | AM |
| 115 | Cunoniaceae | AM | AM | AM | MIX |
| 116 | Cupressaceae | AM | AM | AM | AM |
| 117 | Curtisiaceae | AM | AM | AM | AM |
| 118 | Cycadaceae | AM | AM | AM | AM |

| | | | | | |
|-----|------------------|----|-----|-----|-----|
| 119 | Cyclanthaceae | NM | NM | MIX | MIX |
| 120 | Cymodoceaceae | NM | NM | NM | NM |
| 121 | Cynomoriaceae | NM | NM | NM | NM |
| 122 | Cyperaceae | NM | MIX | MIX | MIX |
| 123 | Cyrillaceae | AM | AM | AM | AM |
| 124 | Cytinaceae | AM | AM | AM | AM |
| 125 | Daphniphyllaceae | AM | AM | AM | AM |
| 127 | Datisceae | AM | AM | AM | AM |
| 128 | Degeneriaceae | AM | AM | AM | AM |
| 129 | Diapensiaceae | ER | ER | ER | ER |
| 130 | Dichapetalaceae | AM | AM | AM | AM |
| 132 | Dilleniaceae | AM | AM | AM | AM |
| 134 | Dioscoreaceae | AM | AM | AM | AM |
| 135 | Dipentodontaceae | AM | AM | AM | AM |
| 136 | Dipterocarpaceae | EM | EM | EM | EM |
| 137 | Dirachmaceae | AM | AM | AM | AM |
| 138 | Doryanthaceae | AM | AM | AM | AM |
| 139 | Droseraceae | NM | NM | NM | NM |
| 140 | Drosophyllaceae | NM | NM | NM | NM |
| 141 | Ebenaceae | AM | AM | AM | AM |
| 142 | Ecdeiocolaceae | AM | AM | AM | AM |
| 143 | Elaeagnaceae | AM | AM | AM | AM |
| 144 | Elaeocarpaceae | AM | AM | AM | AM |
| 145 | Elatinaceae | NM | NM | MIX | MIX |
| 146 | Emblingiaceae | NM | NM | NM | NM |
| 147 | Ephedraceae | AM | AM | AM | AM |
| 149 | Eriocaulaceae | AM | AM | AM | MIX |
| 150 | Erythroxylaceae | AM | AM | AM | AM |
| 151 | Escalloniaceae | AM | AM | AM | AM |
| 152 | Eucommiaceae | AM | AM | AM | AM |
| 153 | Euphorbiaceae | AM | AM | AM | MIX |
| 154 | Euphroniaceae | AM | AM | AM | AM |
| 155 | Eupomatiaceae | AM | AM | AM | AM |
| 156 | Eupteleaceae | AM | AM | AM | AM |
| 157 | Fagaceae | EM | EM | EM | EM |
| 158 | Flagellariaceae | AM | AM | AM | AM |
| 159 | Fouquieriaceae | AM | AM | AM | AM |
| 160 | Frankeniaceae | NM | NM | NM | NM |
| 161 | Garryaceae | AM | AM | AM | AM |
| 163 | Gelsemiaceae | AM | AM | AM | AM |
| 164 | Gentianaceae | AM | AM | AM | MIX |
| 165 | Geraniaceae | AM | AM | AM | AM |
| 167 | Gesneriaceae | AM | AM | AM | AM |
| 168 | Ginkgoaceae | AM | AM | AM | AM |
| 170 | Gnetaceae | EM | EM | EM | EM |
| 171 | Gomortegaceae | AM | AM | AM | AM |
| 172 | Goodeniaceae | AM | MIX | MIX | MIX |
| 173 | Goupiaceae | AM | AM | AM | AM |
| 174 | Grossulariaceae | AM | AM | AM | AM |
| 175 | Grubbiaceae | AM | AM | AM | AM |
| 176 | Gunneraceae | AM | AM | AM | AM |

| | | | | | |
|-----|------------------|----|-----|-----|-----|
| 177 | Gyrostemonaceae | NM | NM | NM | NM |
| 178 | Haemodoraceae | NM | NM | NM | NM |
| 179 | Halophytaceae | NM | NM | NM | NM |
| 180 | Haloragaceae | AM | AM | MIX | MIX |
| 181 | Hamamelidaceae | AM | AM | AM | AM |
| 182 | Hanguanaceae | AM | AM | AM | AM |
| 183 | Haptanthaceae | AM | AM | AM | AM |
| 184 | Heliconiaceae | AM | AM | AM | AM |
| 185 | Helwingiaceae | AM | AM | AM | AM |
| 186 | Hernandiaceae | AM | AM | AM | AM |
| 187 | Himantandraceae | AM | AM | AM | AM |
| 188 | Huaceae | AM | AM | AM | AM |
| 189 | Humiriaceae | AM | AM | AM | AM |
| 191 | Hydnoraceae | AM | AM | AM | AM |
| 192 | Hydrangeaceae | AM | AM | AM | MIX |
| 193 | Hydrocharitaceae | NM | MIX | MIX | MIX |
| 196 | Hypericaceae | AM | AM | AM | AM |
| 197 | Hypoxidaceae | AM | AM | AM | AM |
| 198 | Icacinaceae | AM | AM | AM | AM |
| 199 | Iridaceae | AM | AM | AM | MIX |
| 200 | Irvingiaceae | AM | AM | AM | AM |
| 201 | Iteaceae | AM | AM | AM | AM |
| 202 | Ixioliriaceae | AM | AM | AM | AM |
| 203 | Ixonanthaceae | AM | AM | AM | AM |
| 204 | Joinvilleaceae | AM | AM | AM | AM |
| 205 | Juglandaceae | EM | MIX | MIX | MIX |
| 207 | Juncaginaceae | NM | NM | NM | MIX |
| 208 | Kirkiaceae | AM | AM | AM | AM |
| 209 | Koeberliniaceae | NM | NM | NM | NM |
| 210 | Krameriaceae | AM | AM | AM | AM |
| 211 | Lacistemataceae | AM | AM | AM | AM |
| 212 | Lactoridaceae | AM | AM | AM | AM |
| 213 | Lamiaceae | AM | AM | AM | MIX |
| 214 | Lanariaceae | AM | AM | AM | AM |
| 215 | Lardizabalaceae | AM | AM | AM | AM |
| 216 | Lauraceae | AM | AM | AM | MIX |
| 217 | Lecythidaceae | AM | AM | AM | MIX |
| 218 | Fabaceae | AM | AM | AM | MIX |
| 219 | Lentibulariaceae | NM | NM | MIX | MIX |
| 220 | Lepidobotryaceae | AM | AM | AM | AM |
| 221 | Liliaceae | AM | AM | AM | AM |
| 223 | Limnanthaceae | NM | NM | NM | NM |
| 224 | Linaceae | AM | AM | AM | AM |
| 225 | Linderniaceae | NM | MIX | MIX | MIX |
| 226 | Loasaceae | NM | NM | NM | MIX |
| 227 | Loganiaceae | AM | AM | AM | AM |
| 228 | Loranthaceae | NM | NM | NM | NM |
| 229 | Lowiaceae | AM | AM | AM | AM |
| 230 | Lythraceae | AM | AM | AM | MIX |
| 231 | Magnoliaceae | AM | AM | AM | AM |
| 232 | Malpighiaceae | AM | AM | AM | AM |

| | | | | | |
|-----|--------------------|-----|-----|-----|-----|
| 233 | Malvaceae | AM | AM | AM | MIX |
| 234 | Marantaceae | AM | AM | MIX | MIX |
| 235 | Marcgraviaceae | AM | AM | AM | AM |
| 236 | Martyniaceae | AM | AM | AM | AM |
| 238 | Melanthiaceae | AM | AM | AM | AM |
| 239 | Melastomataceae | AM | AM | AM | AM |
| 240 | Meliaceae | AM | AM | AM | AM |
| 241 | Melanthaceae | AM | AM | AM | AM |
| 242 | Menispermaceae | AM | AM | AM | AM |
| 243 | Menyanthaceae | NM | MIX | MIX | MIX |
| 245 | Misodendraceae | NM | NM | NM | NM |
| 246 | Mitrastemonaceae | NM | NM | NM | NM |
| 247 | Molluginaceae | NM | NM | MIX | MIX |
| 248 | Monimiaceae | AM | AM | AM | AM |
| 249 | Montiaceae | AM | AM | MIX | MIX |
| 250 | Montiniaceae | AM | AM | AM | AM |
| 251 | Moraceae | AM | AM | AM | MIX |
| 252 | Moringaceae | AM | AM | AM | AM |
| 253 | Muntingiaceae | AM | AM | AM | AM |
| 254 | Musaceae | AM | AM | AM | AM |
| 255 | Myodocarpaceae | AM | AM | AM | AM |
| 256 | Myricaceae | AM | AM | MIX | MIX |
| 257 | Myristicaceae | AM | AM | AM | AM |
| 258 | Myrothamnaceae | AM | AM | AM | AM |
| 259 | Myrtaceae | AM | AM | AM | MIX |
| 260 | Nartheciaceae | AM | AM | AM | MIX |
| 261 | Nelumbonaceae | NM | NM | NM | NM |
| 263 | Neuradaceae | AM | AM | AM | AM |
| 264 | Nitrariaceae | AM | AM | AM | AM |
| 265 | Nothofagaceae | EM | EM | EM | EM |
| 266 | Nyctaginaceae | MIX | MIX | MIX | MIX |
| 267 | Nymphaeaceae | NM | NM | MIX | MIX |
| 268 | Ochnaceae | AM | AM | MIX | MIX |
| 269 | Olacaceae | AM | AM | AM | MIX |
| 270 | Oleaceae | AM | AM | AM | AM |
| 271 | Onagraceae | AM | AM | AM | MIX |
| 272 | Oncothecaceae | AM | AM | AM | AM |
| 275 | Orobanchaceae | NM | NM | MIX | MIX |
| 276 | Oxalidaceae | AM | AM | AM | AM |
| 277 | Paeoniaceae | AM | AM | AM | AM |
| 278 | Pandaceae | AM | AM | AM | AM |
| 279 | Pandanaceae | AM | AM | MIX | MIX |
| 280 | Papaveraceae | NM | MIX | MIX | MIX |
| 281 | Paracryphiaceae | AM | AM | AM | AM |
| 282 | Passifloraceae | AM | AM | AM | AM |
| 283 | Paulowniaceae | AM | AM | MIX | MIX |
| 284 | Pedaliaceae | AM | AM | MIX | MIX |
| 285 | Penaeaceae | AM | AM | AM | AM |
| 286 | Pentadiplandraceae | NM | NM | NM | NM |
| 287 | Pentaphragmataceae | AM | AM | AM | AM |
| 288 | Pentaphylacaceae | AM | AM | AM | AM |

| | | | | | |
|-----|-------------------|-----|-----|-----|-----|
| 290 | Peridiscaceae | AM | AM | AM | AM |
| 291 | Petermanniaceae | AM | AM | AM | AM |
| 292 | Petrosaviaceae | AM | AM | AM | AM |
| 293 | Philesiaceae | AM | AM | AM | AM |
| 294 | Philydraceae | AM | AM | AM | AM |
| 295 | Phrymaceae | AM | AM | AM | AM |
| 296 | Phyllanthaceae | AM | AM | AM | MIX |
| 297 | Phyllonomaceae | AM | AM | AM | AM |
| 299 | Phytolaccaceae | NM | NM | MIX | MIX |
| 300 | Picramniaceae | AM | AM | AM | AM |
| 301 | Picrodendraceae | AM | AM | AM | AM |
| 302 | Pinaceae | EM | EM | EM | EM |
| 303 | Piperaceae | AM | MIX | MIX | MIX |
| 304 | Pittosporaceae | AM | AM | AM | AM |
| 305 | Plantaginaceae | AM | AM | MIX | MIX |
| 306 | Platanaceae | AM | AM | AM | AM |
| 307 | Plocospermataceae | AM | AM | AM | AM |
| 308 | Plumbaginaceae | NM | MIX | MIX | MIX |
| 309 | Poaceae | AM | AM | AM | MIX |
| 310 | Podocarpaceae | AM | AM | AM | AM |
| 311 | Podostemaceae | NM | NM | NM | NM |
| 312 | Polemoniaceae | AM | AM | AM | MIX |
| 313 | Polygalaceae | AM | AM | AM | AM |
| 314 | Polygonaceae | MIX | MIX | MIX | MIX |
| 316 | Portulacaceae | NM | NM | MIX | MIX |
| 317 | Posidoniaceae | NM | NM | NM | NM |
| 318 | Potamogetonaceae | NM | NM | NM | MIX |
| 319 | Primulaceae | AM | AM | AM | AM |
| 320 | Proteaceae | NM | NM | NM | MIX |
| 321 | Putranjivaceae | AM | AM | AM | AM |
| 322 | Quillajaceae | AM | AM | AM | AM |
| 323 | Rafflesiaceae | NM | NM | NM | NM |
| 324 | Ranunculaceae | AM | AM | AM | MIX |
| 325 | Rapateaceae | AM | AM | AM | AM |
| 326 | Resedaceae | NM | NM | NM | NM |
| 327 | Restionaceae | NM | MIX | MIX | MIX |
| 329 | Rhamnaceae | AM | AM | AM | MIX |
| 330 | Rhipogonaceae | AM | AM | AM | AM |
| 331 | Rhizophoraceae | AM | MIX | MIX | MIX |
| 332 | Roridulaceae | NM | NM | NM | NM |
| 333 | Rosaceae | AM | AM | AM | MIX |
| 334 | Rousseaceae | AM | AM | AM | AM |
| 335 | Rubiaceae | AM | AM | AM | MIX |
| 337 | Rutaceae | AM | AM | AM | MIX |
| 338 | Sabiaceae | AM | AM | AM | AM |
| 339 | Salicaceae | AM | AM | MIX | MIX |
| 340 | Salvadoraceae | NM | NM | MIX | MIX |
| 341 | Santalaceae | NM | MIX | MIX | MIX |
| 342 | Sapindaceae | AM | AM | AM | AM |
| 343 | Sapotaceae | AM | AM | AM | MIX |
| 344 | Sarcobataceae | NM | NM | NM | NM |

| | | | | | |
|-----|--------------------|----|-----|-----|-----|
| 345 | Sarcolaenaceae | EM | EM | EM | EM |
| 346 | Sarraceniaceae | NM | NM | NM | NM |
| 347 | Saururaceae | AM | AM | AM | AM |
| 348 | Saxifragaceae | NM | MIX | MIX | MIX |
| 350 | Schisandraceae | AM | AM | AM | AM |
| 351 | Schlegeliaceae | AM | AM | AM | AM |
| 352 | Schoepfiaceae | AM | AM | AM | AM |
| 353 | Sciadopityaceae | AM | AM | AM | AM |
| 354 | Scrophulariaceae | AM | AM | AM | MIX |
| 356 | Simaroubaceae | AM | AM | AM | AM |
| 357 | Simmondsiaceae | AM | AM | AM | AM |
| 358 | Siparunaceae | AM | AM | AM | AM |
| 359 | Sladeniaceae | AM | AM | AM | AM |
| 360 | Smilacaceae | AM | AM | AM | AM |
| 361 | Solanaceae | AM | AM | AM | AM |
| 362 | Sphaerosepalaceae | AM | AM | AM | AM |
| 363 | Sphenocleaceae | NM | NM | NM | NM |
| 364 | Stachyuraceae | AM | AM | AM | AM |
| 365 | Staphyleaceae | AM | AM | AM | AM |
| 366 | Stegnospermataceae | AM | AM | AM | AM |
| 367 | Stemonaceae | AM | AM | AM | AM |
| 368 | Stemonuraceae | AM | AM | AM | AM |
| 369 | Stilbaceae | AM | AM | AM | AM |
| 371 | Strelitziaceae | AM | AM | AM | AM |
| 372 | Stylidiaceae | AM | AM | AM | AM |
| 373 | Styracaceae | AM | AM | AM | AM |
| 374 | Surianaceae | AM | AM | AM | AM |
| 375 | Symplocaceae | AM | AM | AM | AM |
| 378 | Tapisciaceae | AM | AM | AM | AM |
| 379 | Taxaceae | AM | AM | AM | AM |
| 380 | Tecophilaeaceae | AM | AM | AM | AM |
| 381 | Tetrachondraceae | AM | AM | AM | AM |
| 382 | Tetramelaceae | AM | AM | AM | AM |
| 383 | Tetrameristaceae | AM | AM | AM | AM |
| 384 | Theaceae | AM | AM | AM | AM |
| 385 | Thurniaceae | AM | AM | AM | AM |
| 386 | Thymelaeaceae | AM | AM | AM | MIX |
| 387 | Ticodendraceae | EM | EM | EM | EM |
| 388 | Tofieldiaceae | AM | AM | MIX | MIX |
| 389 | Torricelliaceae | AM | AM | AM | AM |
| 391 | Trigoniaceae | AM | AM | AM | AM |
| 392 | Triuridaceae | AM | AM | AM | AM |
| 393 | Trochodendraceae | AM | AM | AM | AM |
| 394 | Tropaeolaceae | AM | AM | AM | AM |
| 396 | Ulmaceae | AM | AM | AM | AM |
| 397 | Urticaceae | AM | MIX | MIX | MIX |
| 398 | Vahliaceae | AM | AM | AM | AM |
| 399 | Velloziaceae | AM | AM | AM | AM |
| 400 | Verbenaceae | AM | AM | AM | AM |
| 401 | Violaceae | AM | AM | AM | AM |
| 402 | Vitaceae | AM | AM | AM | AM |

| | | | | | |
|-----|------------------|----|----|-----|-----|
| 403 | Vivianiaceae | AM | AM | AM | AM |
| 404 | Vochysiaceae | AM | AM | AM | AM |
| 405 | Welwitschiaceae | AM | AM | AM | AM |
| 406 | Winteraceae | AM | AM | AM | AM |
| 407 | Xanthorrhoeaceae | AM | AM | AM | AM |
| 408 | Xeronemataceae | AM | AM | AM | AM |
| 410 | Zamiaceae | AM | AM | AM | AM |
| 411 | Zingiberaceae | AM | AM | AM | AM |
| 412 | Zosteraceae | NM | NM | NM | NM |
| 413 | Zygophyllaceae | AM | AM | MIX | MIX |

4 Phylogenetic signal of diversification rates, age, and richness

Table 2: Phylogenetic signal of the four response variables

| Variable | Lambda |
|-------------------|-----------|
| r (epsilon = 0) | 0.4681621 |
| r (epsilon = 0.9) | 0.3510291 |
| Stem Age | 1.0000000 |
| Richness | 0.0000010 |

5 Phylogenetic ANOVA

5.1 Summary statistics

Table 3: phyANOVA summary statistics for both values of epsilon

| epsilon | F | pvalue |
|---------|----------|--------|
| 0.0 | 6.151844 | 0.017 |
| 0.9 | 5.974891 | 0.021 |

5.2 Posthoc tests

Table 4: Pairwise Corrected p-values for epsilon = 0

| | AM | EM | MIX | NM |
|-----|-------|----|-------|------|
| AM | 1.000 | 1 | 0.006 | 1.00 |
| EM | 1.000 | 1 | 1.000 | 1.00 |
| MIX | 0.006 | 1 | 1.000 | 0.01 |
| NM | 1.000 | 1 | 0.010 | 1.00 |

Table 5: Pairwise Corrected p-values for epsilon = 0.9

| | AM | EM | MIX | NM |
|-----|------|-------|-------|-------|
| AM | 1.00 | 1.000 | 0.010 | 1.000 |
| EM | 1.00 | 1.000 | 0.976 | 1.000 |
| MIX | 0.01 | 0.976 | 1.000 | 0.006 |
| NM | 1.00 | 1.000 | 0.006 | 1.000 |

6 Species-level database

6.1 Clean database - excluding species with any remark

6.1.1 Boxplots

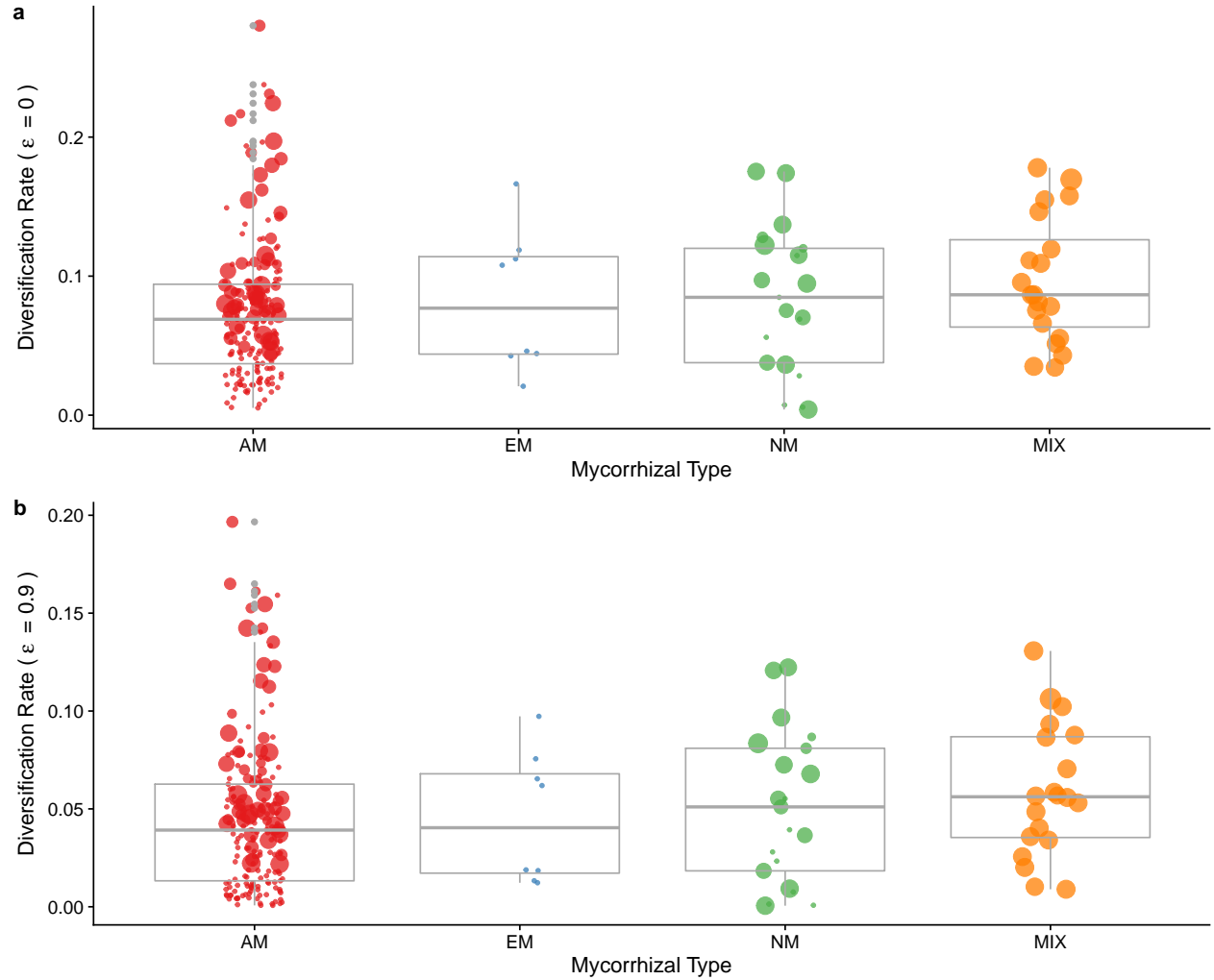


Figure 3: Relationship between mycorrhizal type and diversification rates. a) diversification rate estimated with (relative extinction fraction) = 0 and b) diversification rate estimated with = 0.9. AM: Arbuscular mycorrhiza, EM: Ectomycorrhiza, NM: non-mycorrhizal and MIX (families with no dominance of any specific mycorrhizal association). The size of the points indicates the Mycorrhizal Type Diversity Index value for each lineage, indicating a predominance of larger indices with higher diversification rates.

6.1.2 Scatterplots

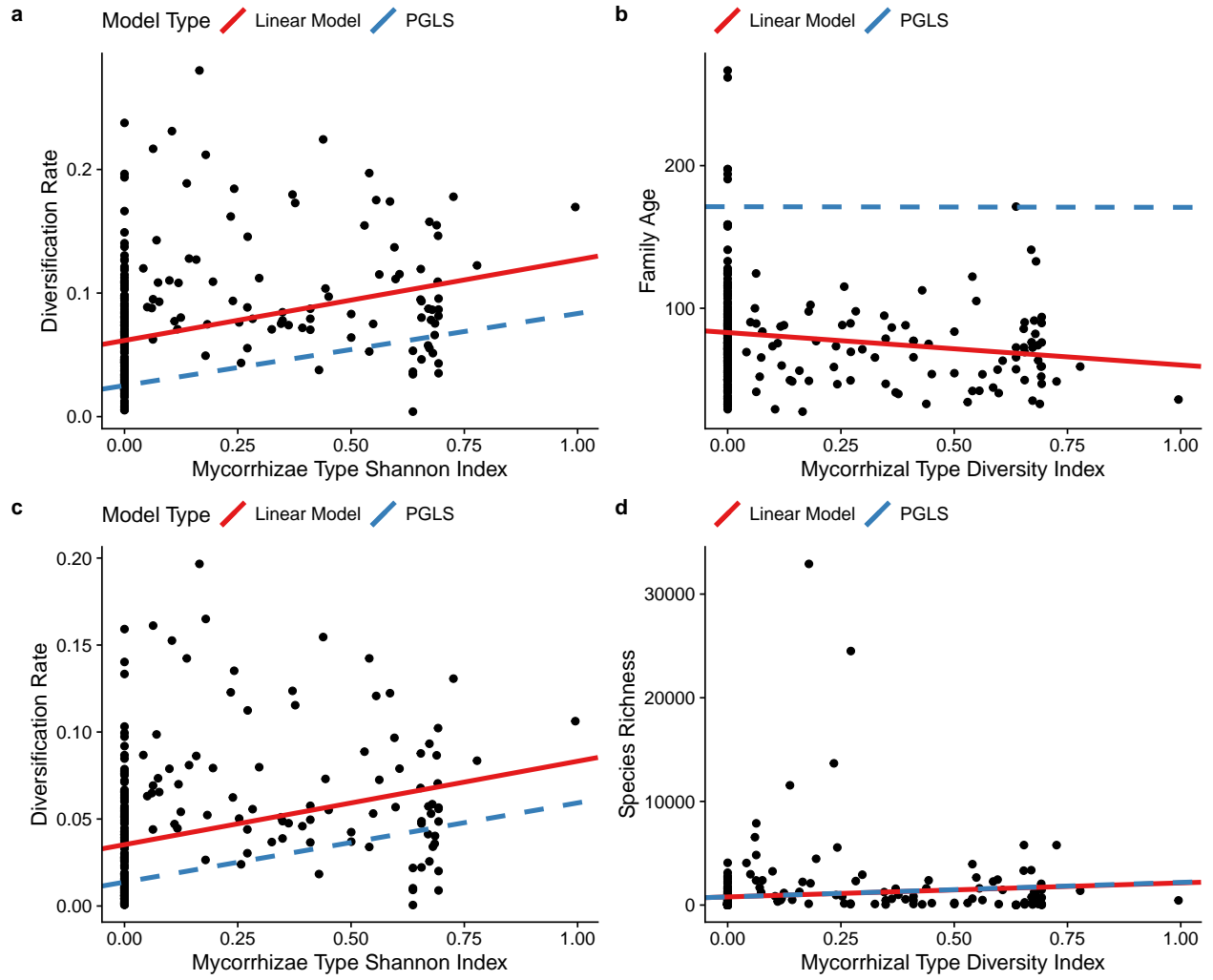


Figure 4: Scatterplots showing the relationship between mycorrhizal diversity index and diversification rates (a and c), species richness (b) and age family (d). Diversification rates were estimated with (relative extinction fraction) = 0 (a) and with = 0.9 (c). The red and blue lines indicate the results of a linear model and a phylogenetic generalized least squares (PGLS) fit, respectively.

6.2 More inclusive database - including species with any remark

6.2.1 Boxplots

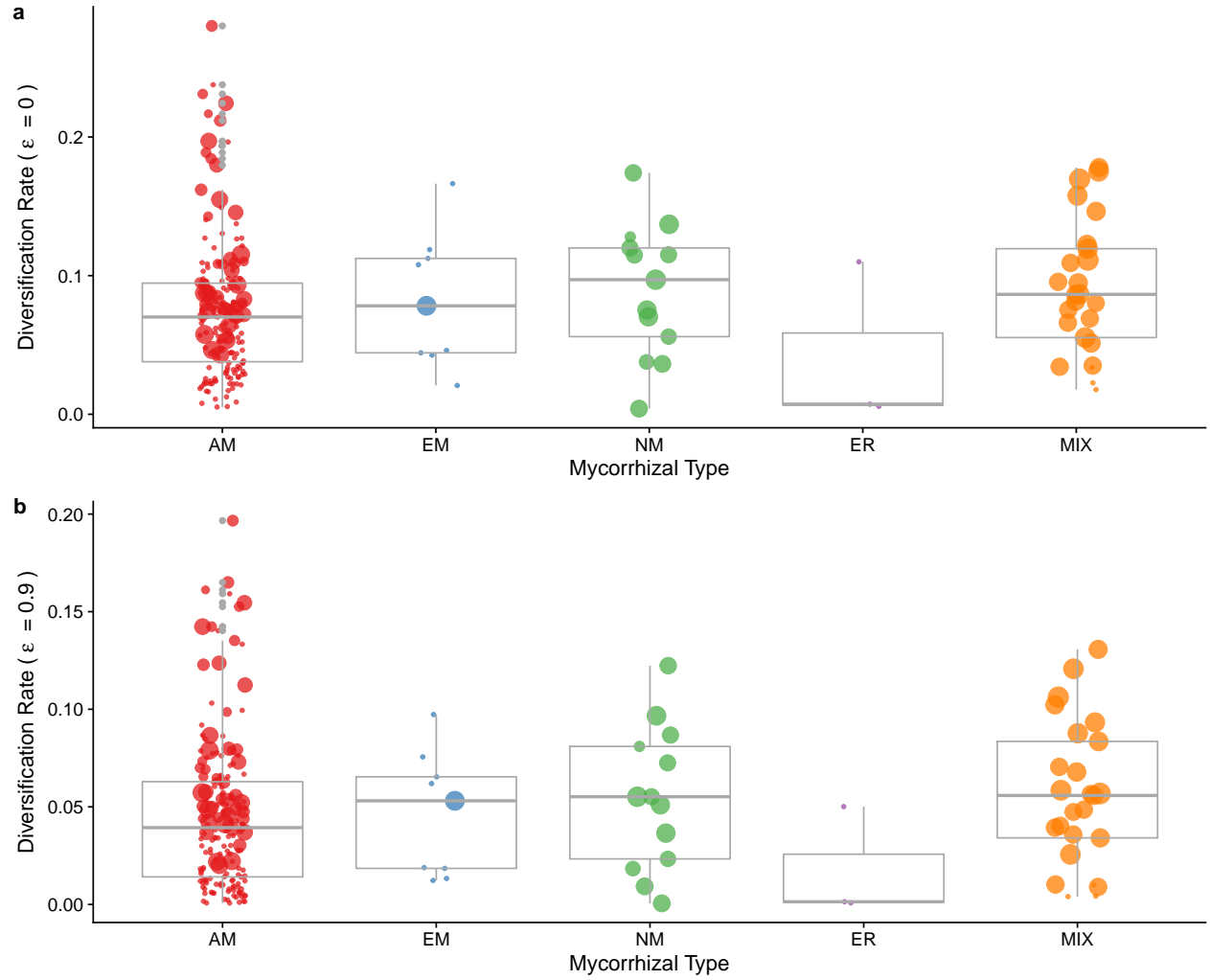


Figure 5: Relationship between mycorrhizal type and diversification rates. a) diversification rate estimated with $(\text{relative extinction fraction}) = 0$ and b) diversification rate estimated with $= 0.9$. AM: Arbuscular mycorrhiza, EM: Ectomycorrhiza, NM: non-mycorrhizal and MIX (families with no dominance of any specific mycorrhizal association). The size of the points indicates the Mycorrhizal Type Diversity Index value for each lineage, indicating a predominance of larger indices with higher diversification rates.

6.2.2 Scatterplots

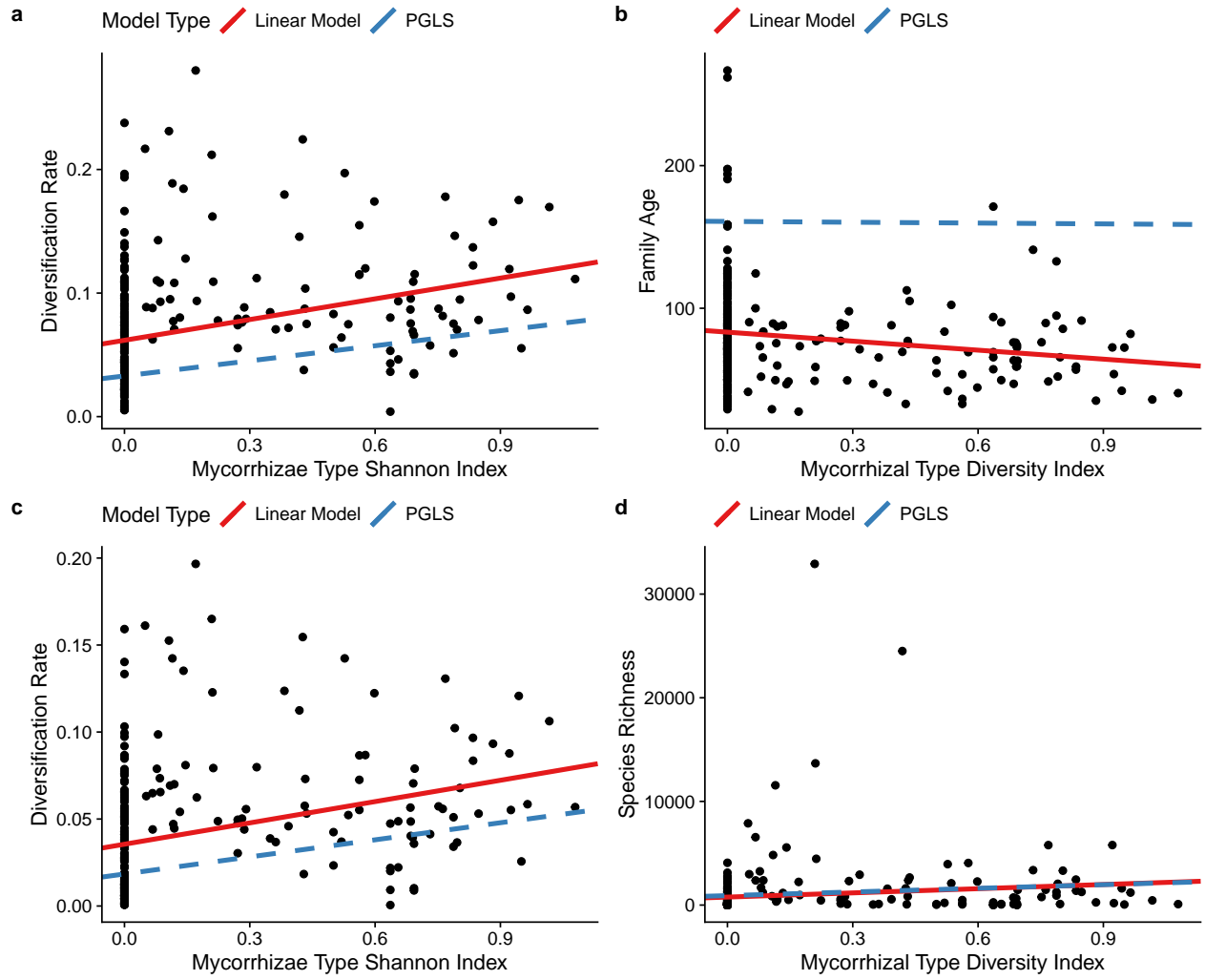


Figure 6: Scatterplots showing the relationship between mycorrhizal diversity index and diversification rates (a and c), species richness (b) and age family (d). Diversification rates were estimated with (relative extinction fraction) = 0 (a) and with = 0.9 (c). The red and blue lines indicate the results of a linear model and a phylogenetic generalized least squares (PGLS) fit, respectively.