**Supplemental Information for:**

**Community dynamics of soil-borne fungal communities along elevation gradients in neotropical and paleotropical forests**

József Geml, A. Elizabeth Arnold, Tatiana A. Semenova-Nelsen, Eduardo R. Nouhra, Elisandro R. Drechsler-Santos, Aristóteles Góes-Neto, Luis N. Morgado, Péter Ódor, Balázs Hegyi, Oriol Grau, Alicia Ibáñez, Leho Tedersoo, François Lutzoni

**Table of Contents:**

|  |  |
| --- | --- |
| **Figures S1-S5: Study areas** | Page 2 |
| **Figure S6: Correlation of environmental variables with elevation** | Page 7 |
| **Figure S7: Correlation of proportional richness of functional groups of fungi with elevation** | Page 8 |
| **Figure S8: Correlation of proportional abundance of functional groups of fungi with elevation** | Page 9 |
| **Table S1. Sampling sites included in this study** | Page 10 |
| **Table S2: Correlation matrix of environmental variables and richness values of fungal functional groups for the pantropical comparison.** | Page 15 |

Fig. S1. A map of the sampling localities in the Yungas forests of northwestern Argentina, with the location of the region of study in South America (lower right inset) and with the details of the sampling areas (four insets on the left).

A picture containing calendar

Description automatically generated

Fig. S2. A map of the sampling localities in the southern Atlantic forests in Brazil, with the location of the region of study in South America (inset).

Map

Description automatically generated

Fig. S3. A map of the sampling localities in Panama, with the location of the region of study in Central America (inset left) and with the details of the sampled sites in Parque Nacional Barú (inset right).

Diagram

Description automatically generated

Fig. S4. A map of the sampling localities in Malaysia, with the location of the region of study in Borneo (inset).

A picture containing map

Description automatically generated

Fig. S5. A map of the sampling localities in eastern Papua New Guinea, with the location of the region of study (upper right inset) and details of sampling sites (lower insets).

Diagram

Description automatically generated

Fig. S6. Quadratic regressions of elevation and abiotic variables in the five sampled tropical montane regions included in this study. MAT = mean annual temperature, MAP = mean annual precipitation, OM = soil organic matter content, N = soil Nitrogen content, C/N = Carbon:Nitrogen ratio.



Fig. S7. Quadratic regressions of elevation and proportional richness of functional groups in the five sampled tropical montane regions, calculated per sample, relative to the total fungal richness for that sample, with 95% confidence intervals indicated by grey shading. Significant relationships are marked with asterisk (\*).

Diagram, shape, engineering drawing, arrow

Description automatically generated

Fig. S8. Quadratic regressions of elevation and proportional abundance of functional groups in the five sampled tropical montane regions, calculated per sample, relative to the total fungal rarefied sequence counts for that sample, with 95% confidence intervals indicated by grey shading. Significant relationships are marked with asterisk (\*).

Diagram, shape, engineering drawing, arrow

Description automatically generated

Table S1. Sampling sites included in this study with code, elevation, geographic coordinates, locality, and environmental variables. Abbreviations: MAT = mean annual temperature, MAP = mean annual precipitation, OM = soil organic matter. Locations are displayed in maps of Figures S1-5. Uploaded separately as an Excel table.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Country** | **Site** | **Elevation (masl)** | **Latitude** | **Longitude** | **Locality** | **Province / state** | **pH** | **OM (%)** | **N (%)** | **P (ppm)** | **MAT (Celsius)** | **MAP (mm)** |
| Argentina | SP1 | 550 | -23.7571 | -64.8503 | Parque Nacional Calilegua | Jujuy | 6.85 | 6.31 | 0.27 | 121.5 | 20.5 | 770 |
| Argentina | SP2 | 585 | -23.7522 | -64.8510 | Parque Nacional Calilegua | Jujuy | 7.17 | 4.78 | 0.25 | 79.94 | 20 | 787 |
| Argentina | SP3 | 635 | -23.7554 | -64.8534 | Parque Nacional Calilegua | Jujuy | 5.73 | 5.65 | 0.29 | 108.3 | 20.5 | 770 |
| Argentina | SP4 | 523 | -23.9188 | -64.9345 | Parque Nacional Calilegua | Jujuy | 6.76 | 8.11 | 0.38 | 60.22 | 19.1 | 769 |
| Argentina | SP5 | 491 | -26.8091 | -65.2830 | Parque Percy Hill | Tucumán | 6.35 | 8.29 | 0.38 | 70 | 19.4 | 955 |
| Argentina | SP6 | 759 | -26.7701 | -65.3251 | Reserva Provincial Sierra de San Javier | Tucumán | 5.99 | 9.83 | 0.47 | 38.42 | 18.8 | 880 |
| Argentina | SP7 | 405 | -27.2218 | -65.6256 | Reserva Provincial La Florida | Tucumán | 6.11 | 6.51 | 0.32 | 40.87 | 19.8 | 916 |
| Argentina | SP8 | 431 | -27.2198 | -65.6318 | Reserva Provincial La Florida | Tucumán | 6.33 | 7.18 | 0.38 | 56.25 | 19.8 | 916 |
| Argentina | SM1 | 1070 | -23.7050 | -64.8659 | Parque Nacional Calilegua | Jujuy | 5.94 | 6.44 | 0.29 | 162 | 18.9 | 818 |
| Argentina | SM2 | 920 | -23.6966 | -64.8617 | Parque Nacional Calilegua | Jujuy | 6.23 | 5.71 | 0.27 | 88.43 | 18.9 | 822 |
| Argentina | SM3 | 1010 | -23.6948 | -64.8636 | Parque Nacional Calilegua | Jujuy | 6.38 | 6.24 | 0.27 | 18.6 | 17.7 | 813 |
| Argentina | SM4 | 1645 | -22.3833 | -64.7257 | Vicinity of Parque Nacional Baritú | Salta | 4.77 | 11.69 | 0.55 | 7.66 | 17.7 | 703 |
| Argentina | SM5 | 1614 | -22.3990 | -64.7293 | Vicinity of Parque Nacional Baritú | Salta | 5.43 | 12.09 | 0.57 | 10.58 | 18.1 | 748 |
| Argentina | SM6 | 1675 | -24.1206 | -65.4541 | Parque Provincial Potrero de Yala | Jujuy | 5.75 | 12.89 | 0.66 | 29.45 | 15.7 | 653 |
| Argentina | SM7 | 917 | -27.3335 | -65.8781 | Vicinity of Parque Nacional Campo de Los Alisos | Tucumán | 6.01 | 9.30 | 0.43 | 13.32 | 18.5 | 655 |
| Argentina | SM8 | 1350 | -27.3226 | -65.9147 | Vicinity of Parque Nacional Campo de Los Alisos | Tucumán | 6.24 | 7.04 | 0.36 | 4.73 | 18.1 | 602 |
| Argentina | BM1 | 1710 | -23.6823 | -64.9019 | Parque Nacional Calilegua | Jujuy | 4.36 | 10.10 | 0.45 | 54.46 | 16.4 | 735 |
| Argentina | BM2 | 1635 | -23.6853 | -64.8997 | Parque Nacional Calilegua | Jujuy | 3.75 | 11.69 | 0.48 | 38.42 | 15.9 | 690 |
| Argentina | BM3 | 1550 | -23.6847 | -64.8910 | Parque Nacional Calilegua | Jujuy | 5.81 | 4.32 | 0.19 | 234.7 | 15.9 | 690 |
| Argentina | BM4 | 1705 | -22.3424 | -64.7256 | Vicinity of Los Toldos | Salta | 4.26 | 9.97 | 0.49 | 2.94 | 17.3 | 661 |
| Argentina | BM5 | 1729 | -22.3556 | -64.7225 | Vicinity of Los Toldos | Salta | 4.6 | 12.89 | 0.63 | 1.8 | 17.2 | 661 |
| Argentina | BM6 | 1754 | -22.2778 | -64.7252 | Reserva Nacional El Nogalar | Salta | 4.86 | 12.36 | 0.63 | 6.71 | 17.2 | 643 |
| Argentina | BM7 | 2155 | -24.0937 | -65.4827 | Parque Provincial Potrero de Yala | Jujuy | 4.44 | 9.83 | 0.46 | 10.49 | 13.1 | 365 |
| Argentina | BM8 | 1862 | -27.3309 | -65.9513 | Vicinity of Parque Nacional Campo de Los Alisos | Tucumán | 5.26 | 8.45 | 0.41 | 3.6 | 17 | 453 |
| Brazil | LLF1 | 169 | -27.5282 | -48.5106 | Unidade de Conservação Ambiental Desterro | Santa Catarina | 5.1 | 4.30 | 0.21 | 6.7 | 20 | 1489 |
| Brazil | LLF2 | 133 | -27.5289 | -48.5115 | Unidade de Conservação Ambiental Desterro | Santa Catarina | 5 | 3.00 | 0.17 | 5.1 | 20 | 1489 |
| Brazil | LLF3 | 111 | -27.8218 | -48.5635 | Forest trail between Caieira and Ponta do Frade | Santa Catarina | 4.2 | 3.90 | 0.33 | 8.2 | 19.5 | 1450 |
| Brazil | LLF4 | 46 | -27.8318 | -48.5603 | Forest trail between Caieira and Ponta do Frade | Santa Catarina | 5 | 4.10 | 0.25 | 4.3 | 19.5 | 1450 |
| Brazil | LMF1 | 603 | -27.7062 | -49.2646 | Site along Route 282 | Santa Catarina | 5.9 | 3.60 | 0.52 | 48.2 | 16 | 1640 |
| Brazil | LMF2 | 775 | -27.6987 | -49.2404 | Site along Route 282 | Santa Catarina | 5.8 | 3.20 | 0.36 | 19.7 | 16 | 1640 |
| Brazil | LMF3 | 607 | -27.7020 | -48.9630 | Site along Route 282 | Santa Catarina | 3.6 | 5.70 | 0.20 | 5.2 | 17.1 | 1652 |
| Brazil | UMF1 | 1586 | -28.1541 | -49.6409 | Parque Nacional de São Joaquim | Santa Catarina | 3.6 | 11.80 | 0.60 | 15.8 | 13.6 | 1705 |
| Brazil | UMF2 | 1645 | -28.1638 | -49.6159 | Parque Nacional de São Joaquim | Santa Catarina | 3.9 | 17.40 | 0.84 | 22.9 | 13.6 | 1705 |
| Brazil | UMF3 | 1465 | -28.1493 | -49.6325 | Parque Nacional de São Joaquim | Santa Catarina | 3.9 | 11.80 | 0.45 | 6 | 13.6 | 1705 |
| Brazil | UMF4 | 1449 | -28.1448 | -49.6229 | Parque Nacional de São Joaquim | Santa Catarina | 4.3 | 4.70 | 0.37 | 7.4 | 13.6 | 1705 |
| Panama | IP1 | 6 | 8.0972 | -82.3663 | Parque Nacional Golfo de Chiriquí | Chiriquí | 5.6 | 5.60 | 2.26 | 2 | 26.5 | 2696 |
| Panama | IP2 | 7 | 8.0976 | -82.3660 | Parque Nacional Golfo de Chiriquí | Chiriquí | 5.7 | 6.69 | 2.52 | 6 | 26.2 | 2732 |
| Panama | CAR1 | 28 | 9.2591 | -82.1537 | Parque Nacional Bastimentos | Bocas del Toro | 4.3 | 3.39 | 1.65 | 1 | 25.8 | 3154 |
| Panama | CAR2 | 32 | 9.2592 | -82.1541 | Parque Nacional Bastimentos | Bocas del Toro | 4.7 | 3.39 | 0.34 | 2 | 25.8 | 3154 |
| Panama | G1 | 92 | 9.1195 | -79.6961 | Parque Nacional Soberanía | Colón | 4.6 | 3.52 | 0.98 | 1 | 26.6 | 2260 |
| Panama | CAM1 | 821 | 8.6822 | -79.9303 | Parque Nacional Campana | Panamá | 5.3 | 2.88 | 0.51 | 2 | 22.5 | 2873 |
| Panama | CAM2 | 853 | 8.6846 | -79.9270 | Parque Nacional Campana | Panamá | 4.9 | 3.78 | 0.95 | 1 | 22.5 | 2873 |
| Panama | FOR1 | 1213 | 8.7223 | -82.2388 | Reserva Forestal Fortuna | Chiriquí | 4.7 | 6.69 | 1.00 | 2 | 21 | 2989 |
| Panama | FOR2 | 1254 | 8.7223 | -82.2388 | Reserva Forestal Fortuna | Chiriquí | 4.5 | 6.12 | 0.67 | 1 | 20.4 | 2935 |
| Panama | B11 | 2336 | 8.8114 | -82.5596 | Parque Nacional Volcán Barú | Chiriquí | 4.7 | 7.29 | 0.76 | 33 | 13 | 2533 |
| Panama | B12 | 2447 | 8.8112 | -82.5594 | Parque Nacional Volcán Barú | Chiriquí | 4.4 | 12.33 | 2.16 | 18 | 13 | 2533 |
| Panama | B13 | 2485 | 8.8106 | -82.5590 | Parque Nacional Volcán Barú | Chiriquí | 4.8 | 10.59 | 2.86 | 24 | 13 | 2533 |
| Panama | COP1 | 2902 | 8.8098 | -82.5158 | Parque Nacional Volcán Barú | Chiriquí | 4.7 | 10.59 | 1.58 | 30 | 10.2 | 2669 |
| Panama | COP2 | 2912 | 8.8097 | -82.5151 | Parque Nacional Volcán Barú | Chiriquí | 4.3 | 9.99 | 0.81 | 37 | 10.2 | 2669 |
| Panama | PR21 | 2532 | 8.8123 | -82.5103 | Parque Nacional Volcán Barú | Chiriquí | 4.1 | 7.72 | 1.60 | 10 | 12.5 | 2542 |
| Panama | PR22 | 2592 | 8.8120 | -82.5103 | Parque Nacional Volcán Barú | Chiriquí | 4.1 | 7.94 | 1.10 | 12 | 12.5 | 2542 |
| Malaysia | DF1 | 425 | 5.8555 | 116.1401 | Crocker Range National Park | Sabah | 4.5 | 5.20 | 0.23 | n.a. | 24.4 | 2082 |
| Malaysia | DF2 | 478 | 5.8555 | 116.1392 | Crocker Range National Park | Sabah | 4.8 | 4.33 | 0.18 | n.a. | 24.4 | 2082 |
| Malaysia | DF3 | 551 | 5.8536 | 116.1370 | Crocker Range National Park | Sabah | 4.7 | 4.77 | 0.19 | n.a. | 24.4 | 2036 |
| Malaysia | DF4 | 624 | 5.8472 | 116.1345 | Crocker Range National Park | Sabah | 4.6 | 4.77 | 0.19 | n.a. | 24 | 2085 |
| Malaysia | DF5 | 1000 | 6.1684 | 116.5682 | Kinabalu National Park | Sabah | 4.8 | 11.26 | 0.52 | n.a. | 21.4 | 2186 |
| Malaysia | DF6 | 1020 | 6.1599 | 116.5652 | Kinabalu National Park | Sabah | 4.5 | 6.06 | 0.49 | n.a. | 20.9 | 2188 |
| Malaysia | DF7 | 1067 | 5.7985 | 116.4041 | Crocker Range National Park | Sabah | 4.7 | 22.53 | 0.83 | n.a. | 20.9 | 2087 |
| Malaysia | DF8 | 1120 | 5.7949 | 116.4014 | Crocker Range National Park | Sabah | 4.6 | 22.53 | 0.83 | n.a. | 20.9 | 2088 |
| Malaysia | MF1 | 1880 | 5.8210 | 116.3396 | Crocker Range National Park | Sabah | 3.7 | 7.80 | 0.23 | n.a. | 17.9 | 2073 |
| Malaysia | MF2 | 1920 | 5.8217 | 116.3434 | Crocker Range National Park | Sabah | 3.8 | 7.80 | 0.23 | n.a. | 17.4 | 2073 |
| Malaysia | MF3 | 2039 | 6.0235 | 116.5463 | Kinabalu National Park | Sabah | 4.1 | 21.23 | 0.54 | n.a. | 18 | 2108 |
| Malaysia | MF4 | 2080 | 6.0245 | 116.5465 | Kinabalu National Park | Sabah | 4 | 21.23 | 0.54 | n.a. | 18 | 2108 |
| Malaysia | MF5 | 2100 | 6.0258 | 116.5475 | Kinabalu National Park | Sabah | 4.3 | 22.53 | 0.49 | n.a. | 17.5 | 2098 |
| Malaysia | GBF1 | 3080 | 6.0541 | 116.5653 | Kinabalu National Park | Sabah | 3.8 | 16.03 | 0.51 | n.a. | 11 | 2078 |
| Malaysia | GBF2 | 3100 | 6.0543 | 116.5654 | Kinabalu National Park | Sabah | 4 | 17.33 | 0.30 | n.a. | 11 | 2078 |
| Malaysia | GBF3 | 3120 | 6.0547 | 116.5654 | Kinabalu National Park | Sabah | 3.8 | 14.30 | 0.46 | n.a. | 11 | 2078 |
| Malaysia | SZ1 | 3280 | 6.0589 | 116.5667 | Kinabalu National Park | Sabah | 3.7 | 18.63 | 0.50 | n.a. | 9.1 | 2094 |
| Malaysia | SZ2 | 3600 | 6.0670 | 116.5654 | Kinabalu National Park | Sabah | 4.5 | 5.20 | 0.34 | n.a. | 6.4 | 2119 |
| Malaysia | SZ3 | 4000 | 6.0729 | 116.5613 | Kinabalu National Park | Sabah | 4.6 | 13.86 | 0.40 | n.a. | 6.4 | 2120 |
| Papua New Guinea | G2661 | 254 | -6.6390 | 146.9089 | Vicinty of Lae | Morobe | 6.18 | 8.85 | 0.70 | n.a. | 25.2 | 2387 |
| Papua New Guinea | G2662 | 155 | -6.7129 | 146.8075 | Vicinty of Lae | Morobe | 5.33 | 4.52 | 0.38 | n.a. | 26.0 | 2246 |
| Papua New Guinea | G2663 | 318 | -7.3044 | 147.1035 | Vicinty of Kamiatum | Morobe | 3.34 | 27.60 | 1.11 | n.a. | 25.7 | 2794 |
| Papua New Guinea | G2664 | 144 | -7.3058 | 147.1175 | Vicinty of Kamiatum | Morobe | 4.57 | 23.21 | 1.02 | n.a. | 26.6 | 3065 |
| Papua New Guinea | G2666 | 69 | -7.3058 | 147.1134 | Vicinty of Kamiatum | Morobe | 4.04 | 20.86 | 0.91 | n.a. | 26.4 | 3010 |
| Papua New Guinea | G2669 | 52 | -7.3036 | 147.1324 | Vicinty of Kamiatum | Morobe | 4.8 | 13.56 | 0.57 | n.a. | 26.6 | 3080 |
| Papua New Guinea | G2674 | 54 | -7.2812 | 147.1251 | Vicinty of Kamiatum | Morobe | 5.74 | 8.59 | 0.70 | n.a. | 26.6 | 3115 |
| Papua New Guinea | G2675 | 27 | -6.6524 | 146.8912 | Vicinty of Lae | Morobe | 6.69 | 7.80 | 0.50 | n.a. | 26.5 | 3189 |
| Papua New Guinea | G2676 | 2605 | -6.0550 | 145.2359 | Vicinity of Mount Michael | Eastern Highlands | 3.79 | 26.95 | 1.20 | n.a. | 14.4 | 2030 |
| Papua New Guinea | G2677 | 2457 | -6.0173 | 145.4160 | Vicinity of Goroka | Eastern Highlands | 4.73 | 35.05 | 1.73 | n.a. | 16.2 | 1857 |
| Papua New Guinea | G2678 | 2333 | -6.0149 | 145.4129 | Vicinity of Goroka | Eastern Highlands | 4.3 | 28.42 | 1.55 | n.a. | 15.5 | 1879 |
| Papua New Guinea | G2679 | 2221 | -6.0160 | 145.4092 | Vicinity of Goroka | Eastern Highlands | 3.95 | 27.43 | 1.55 | n.a. | 15.5 | 1879 |
| Papua New Guinea | G2700 | 3555 | -5.7904 | 145.0577 | Vicinity of Mount Wilhelm | Eastern Highlands | 4.46 | 20.39 | 1.25 | n.a. | 8.8 | 2584 |
| Papua New Guinea | G2728 | 2814 | -5.8212 | 145.1414 | Vicinity of Mount Wilhelm | Eastern Highlands | 2.9 | 2.72 | 0.10 | n.a. | 13.3 | 2097 |
| Papua New Guinea | G2729 | 2700 | -5.8155 | 145.1548 | Vicinity of Mount Wilhelm | Eastern Highlands | 2.64 | 44.27 | 1.47 | n.a. | 14.1 | 2015 |
| Papua New Guinea | G2730 | 2697 | -5.8146 | 145.1582 | Vicinity of Mount Wilhelm | Eastern Highlands | 3.11 | 40.23 | 1.53 | n.a. | 14.1 | 2015 |
| Papua New Guinea | G2732 | 2100 | -5.9305 | 145.0333 | Vicinity of Mount Wilhelm | Eastern Highlands | 4.86 | 11.96 | 0.60 | n.a. | 18.5 | 2252 |
| Papua New Guinea | G2733 | 2150 | -5.9305 | 145.0336 | Vicinity of Mount Wilhelm | Eastern Highlands | 4.08 | 21.46 | 0.89 | n.a. | 17.2 | 2094 |
| Papua New Guinea | G2734 | 1668 | -6.0145 | 144.9914 | Vicinity of Mount Michael | Eastern Highlands | 4.76 | 6.14 | 0.45 | n.a. | 20.2 | 2327 |
| Papua New Guinea | G2735 | 1959 | -6.3755 | 145.2436 | Vicinity of Mount Michael | Eastern Highlands | 4.54 | 18.40 | 1.00 | n.a. | 17.7 | 2216 |
| Papua New Guinea | G2736 | 2200 | -6.3755 | 145.2558 | Vicinity of Mount Michael | Eastern Highlands | 3.75 | 11.92 | 0.65 | n.a. | 16.8 | 2310 |
| Papua New Guinea | G2737 | 2383 | -6.3619 | 145.2762 | Vicinity of Mount Michael | Eastern Highlands | 3.89 | 36.97 | 1.77 | n.a. | 15.2 | 2209 |
| Papua New Guinea | G2738 | 2303 | -6.3581 | 145.2764 | Vicinity of Mount Michael | Eastern Highlands | 4.02 | 32.18 | 1.90 | n.a. | 16.3 | 2265 |
| Papua New Guinea | G2739 | 2246 | -6.3531 | 145.2775 | Vicinity of Mount Michael | Eastern Highlands | 3.86 | 15.39 | 0.81 | n.a. | 16.3 | 2265 |
| Papua New Guinea | G2740 | 2280 | -6.2028 | 145.3175 | Vicinity of Mount Michael | Eastern Highlands | 3.33 | 22.63 | 0.99 | n.a. | 16.4 | 2078 |
| Papua New Guinea | G2741 | 2133 | -6.1978 | 145.3248 | Vicinity of Mount Michael | Eastern Highlands | 4.26 | 14.82 | 0.71 | n.a. | 16.2 | 2063 |
| Papua New Guinea | G2742 | 1949 | -6.1933 | 145.3425 | Vicinity of Mount Michael | Eastern Highlands | 3.73 | 23.03 | 1.06 | n.a. | 17.6 | 1973 |

Table S2: Correlation matrix of environmental variables and richness values of fungal functional groups for the pantropical comparison.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Elevation | MAT | MAP | pH | OM | N | CN | All fungi | ECM fungi | Plant path. | Saprotrophs |
| Elevation | 1 |  |  |  |  |  |  |  |  |  |  |
| MAT | -0.886 | 1 |  |  |  |  |  |  |  |  |  |
| MAP | 0.020 | 0.215 | 1 |  |  |  |  |  |  |  |  |
| pH | -0.531 | 0.360 | -0.374 | 1 |  |  |  |  |  |  |  |
| OM | 0.391 | -0.212 | 0.116 | -0.452 | 1 |  |  |  |  |  |  |
| N | 0.220 | -0.067 | 0.432 | -0.233 | 0.535 | 1 |  |  |  |  |  |
| CN | 0.356 | -0.160 | -0.002 | -0.438 | 0.570 | -0.156 | 1 |  |  |  |  |
| All fungi | 0.014 | -0.016 | -0.390 | 0.322 | -0.273 | -0.353 | 0.018 | 1 |  |  |  |
| ECM fungi | 0.293 | -0.070 | 0.266 | -0.366 | 0.341 | 0.180 | 0.375 | -0.075 | 1 |  |  |
| Plant path. | -0.351 | 0.210 | -0.549 | 0.677 | -0.395 | -0.439 | -0.196 | 0.786 | -0.387 | 1 |  |
| Saprotrophs | 0.000 | 0.024 | -0.470 | 0.411 | -0.161 | -0.281 | 0.026 | 0.914 | -0.165 | 0.770 | 1 |
| Wood decomp. | -0.171 | 0.199 | -0.146 | 0.175 | -0.316 | -0.391 | 0.053 | 0.776 | -0.146 | 0.631 | 0.618 |