Legends for supplementary figures and tables

Supplementary Figure 1. Phylogenetic placement of endophytes using the full data set (i.e., not subsampled for comparable sample structure among categories; for those analyses see FIG. 2.). A. Biotic zones. B. Elevation groups. C. Host groups.

Supplementary Figure 2. Distance decay of fungal similarity within the Petran, Madrean, and Neotropical biotic zones. The significant and positive correlation between geographic distance and fungal dissimilarity was determined by partial Mantel tests while controlling for the relevance of elevation. A, B. Petran. C, D. Madrean. E, F. Neotropical.

Supplementary Figure 3. Endophyte communities associated with foliage of Cupressaceae differ as a function of biotic zone, host genus and elevation. Community structure is visualized by NMDS, with results from PERMANOVA and ANOSIM shown in SUPPLEMENTARY TABLE 7. Arrows indicate MAT and MAP. Fungal dissimilarity was calculated using the Jaccard index (panel A) and Morisita-Horn index (panel B).

Supplementary Figure 4. A lack of distance decay of fungal similarity among endophytes of Cupressaceae, with statistical analysis by a partial Mantel test.

Supplementary Table 1. Geographic, climate and host- information for endophytes from Arizona deposited in the Robert L. Gilbertson Mycological Herbarium, 2005–2014.

Supplementary Table 2. Summary of class assignments by T-BAS.

Supplementary Table 3. Structure of endophyte communities as a function of hosts and geographic regions in Arizona. Geographic regions are defined as four broad areas of the state: N, north; C, central; SE, southeast; SW, southwest.

Supplementary Table 4. The structure of endophyte communities in angiosperms and gymnosperms as a function of biotic zones and elevation, as evaluated by ANOSIM.

Supplementary Table 5. The structure of endophyte communities in angiosperms and gymnosperms as a function of host family, biotic zones, and elevation, as evaluated by ANOSIM.

Supplementary Table 6. Summary of class assignments in T-BAS for endophytes of Cupressaceae.

Supplementary Table 7. Structure of endophyte communities in Cupressaceae as a function of biotic zone, host genus, and elevation.

Supplementary Table 8. Arrows indicate MAT and MAP ($P<0.05$ with respect to community structure). Fungal dissimilarity was calculated using the Jaccard index (panel A, C, E) and the Morisita-Horn index (panel B, D, F). A, B. Reduced dataset for endophytes of angiosperms, showing the relevance of biotic zone and elevation. C, D. Reduced dataset for endophytes of gymnosperms, showing the relevance of biotic zone and elevation. E, F. Reduced dataset for endophytes from three families of angiosperms in the Neotropical biotic zone, illustrating the importance of family and elevation. Other biotic zones and data subsets are not depicted because the data reduction process precluded reliable analyses due to small sample sizes.