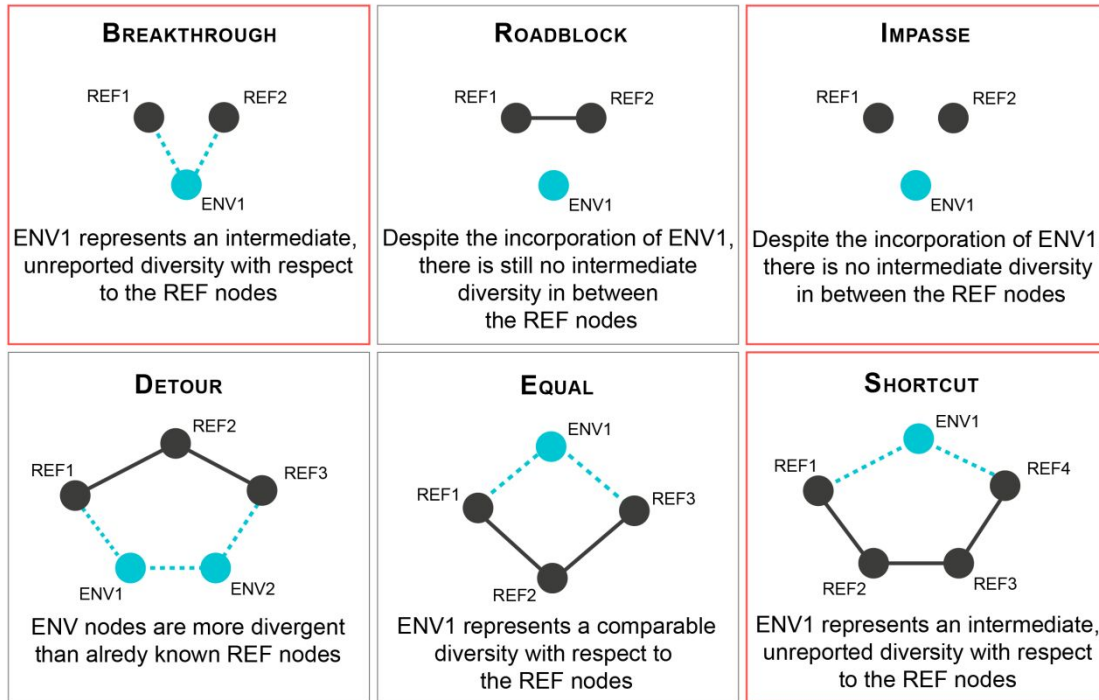
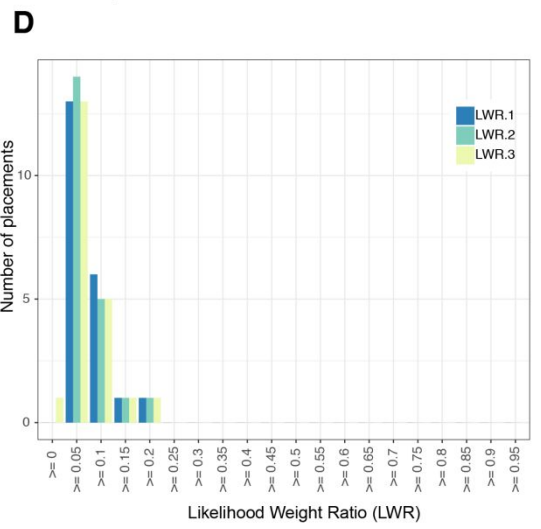
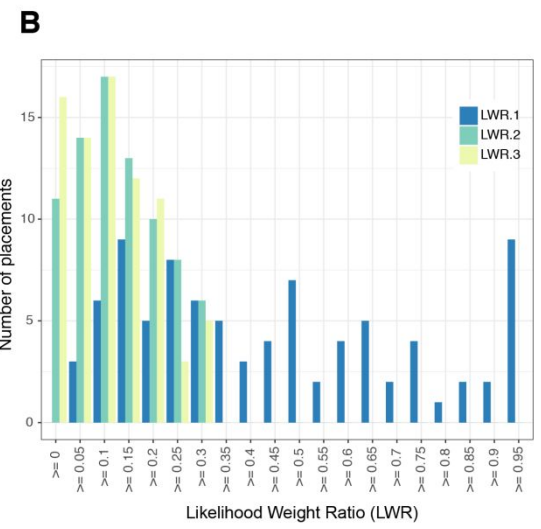
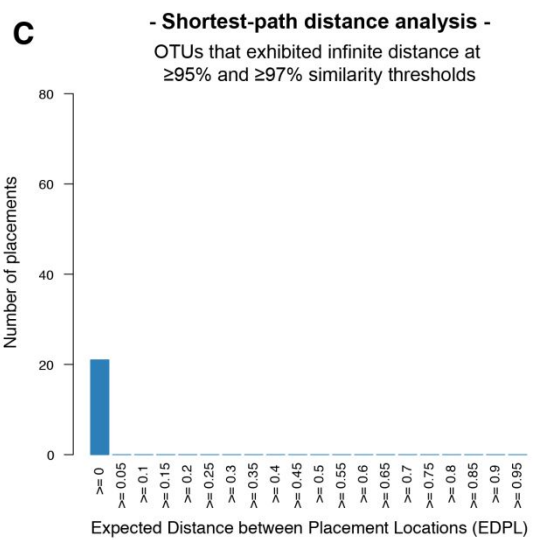
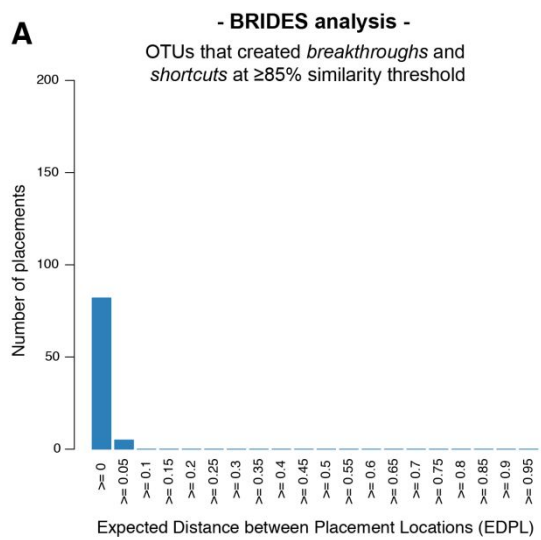


Supplementary Figure 1

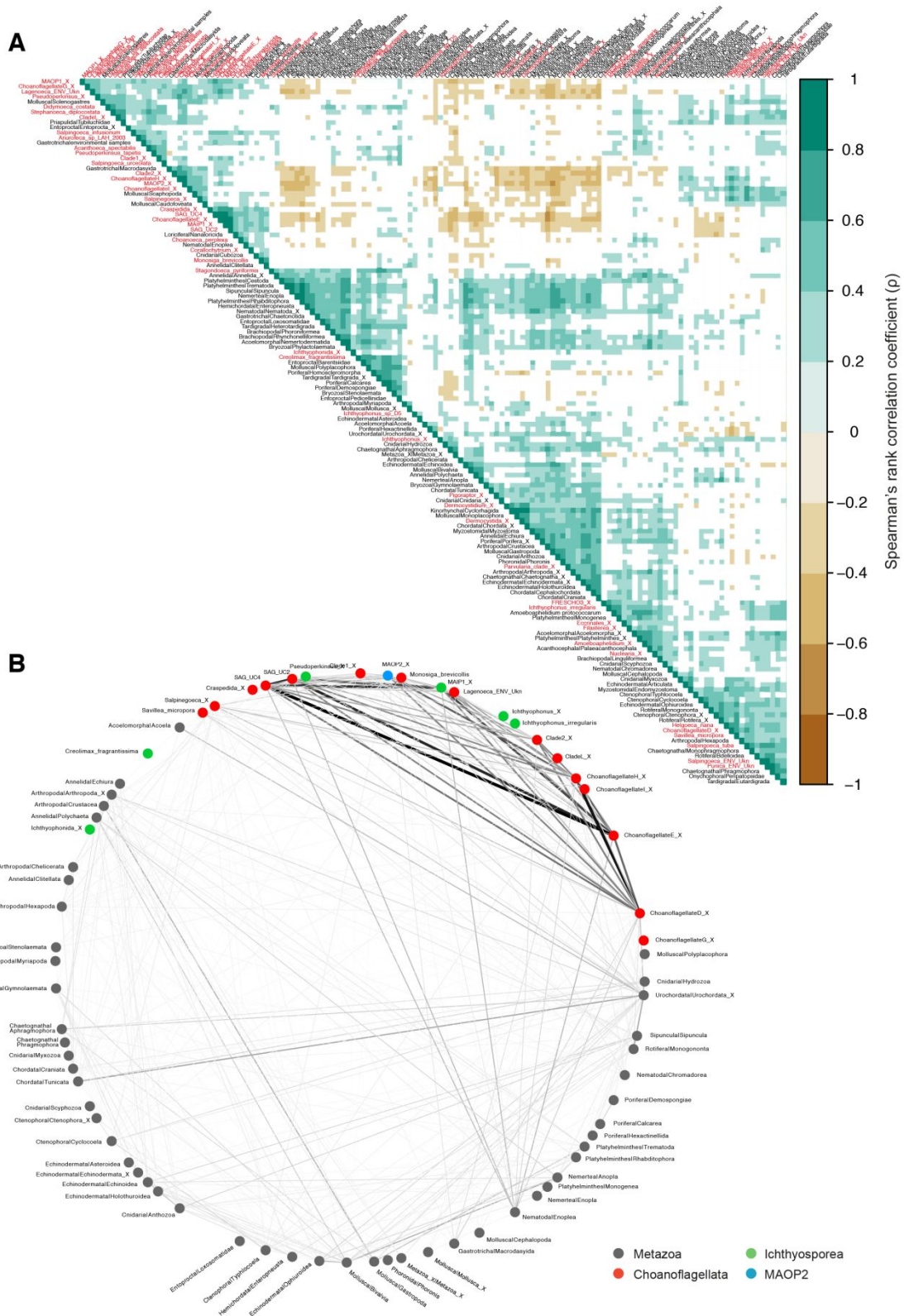
BRIDES statistic	path in the original network	path in the augmented network
Breakthrough	impossible	possible
Roadblock	possible	impossible
Impasse	impossible	impossible
Detour	shorter distance	longer distance
Equal	equal distance	equal distance
Shortcut	longer distance	shorter distance



Supplementary Figure 2



Supplementary Figure 3



Supplementary Figure 4