**Supplementary material figure legends**

Figure S1. Barplot of the six evaporite ponds analysed in this study for display the relative abundance of the very rare genera (abundance levels lower than 0.01%)

Figure S2. Principal coordinate analysis of the Beta diversity among the six evaporite ponds analysed in this study. A) Bray-Curtis distance B) Unifrac unweighted distance C) Unifrac weighted distance

Figure S3. Fit of the Sloan neutral theory blue dots represent OTUs with frequency lower than expected by neutral model suggesting taxa with low dispersal potential, red dots represent OTUs driven by stochastic factors, finally, green dots represent OTUs whose frequency is higher than expected by neutral model and that are favoured by selective pressures