

S1_Table Settings of the ComGen package used to generate virtual community structures

for the analysis

Setting ID	Community type 1 (Figs 2a,b and Fig. 3)	Community type 2 (Fig2 c,d and Fig. 4)	Community type 3 (Figs 2e,f and Fig. 5)
Number of grid cells	1000	1000	1000
Number of species	1000	1000	1000
Type of rank-abundance pattern	log-linear (maximal abundance = 100, slope = 0.005)	log-normal (mean = 3.0, SD = 0.8)	extracted from actual distribution data (freshwater mollusks)
Type of richness pattern	log-linear (slope determined such that the ratio of maximum and minimum richness was 2)	log-linear (slope was determined such that the ratio of maximum and minimum richness was 2)	extracted from actual distribution data (freshwater mollusks)